DAVIS design
P.O. BOX 342
CRESTWOOD, KY.
40014
502-425-5058

PEARL

ENGINEERING DOCUMENTATION


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MATERIALS - CONTENTS

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PLATE 2

MATERIALS

QTY. DESCRIPTION

BEARINGS-(BEARINGS INC.)

4 " 104-KSZZ
1 " RA-012-ATT ("Z04-BASIC)
4 " Z04-SZZ
4 " R6-ZZ
2 " 203-SZZ
4 " WRBB-1012-08
1 " WRBB-610-06

POWER TRANS.-(BOSTON GEAR)

1 " 081601A-WORM GEAR
1 " D1607KRH-WORM
1 " NA148-PINION
1 " L509-2-RACK

POWER TRANS.-(RATIOTROL-BSTN.GR)

1 " PM925AT-B-MOTOR, D.C.
1 " RB-25-CONTROLLER

POWER TRANS-(DODGE-DYNA-SYNC)

1 " 16L050 (DF-1)-PULLEY
1 " TL24L050 (CF-1)-PULLEY
1 " 119193-BUSHING
1 " 187L050-BELT
1 " TL26L050-PULLEY
1 " 119197-BUSHING

1 " 285L050-BELT
1 " 3L360-GOODYEAR SCOR-BELT

HEX HEAD CAP SCREWS

15 1/4-20 x 1 - PLATED
20 5/16-18 x 1 - "
20 5/16-18 x 1 1/2 - "
8 3/8-16 x 1 - "
20 3/8-16 x 1 1/2 - "
8 3/8-16 x 2 - "
10 1/2-20 x 2 1/2 - "

SOCKET HEAD CAP SCREWS

1 " 6-32 x 1/2
2 " 6-32 x 3/4
2 " 6-32 x 1 1/8
1 " 8-32 x 1/2
14 " 8-32 x 3/4
2 " 10-32 x 1/2
2 " 10-32 x 1 1/8
10 1/4-20 x 1
4 1/4-20 x 1 1/2
10 3/8-16 x 1 1/2
4 3/8-16 x 2

FLAT HEAD SOCKET SCREWS

3 " 6-32 x 1/2
2 " 8-32 x 1/4

BUTTON HEAD SOCKET SCREWS

4 " 8-32 x 5/16

ROUND HEAD SLOTTED SCREWS

4 " 10-24 x 1/2
2 " 10-24 x 3/4

FILLISTER HEAD SLOTTED SCREWS

4 " 4-40 x 5/8

SOCKET HEAD SET SCREWS

2 " 4-40 x 3/16
5 " 6-32 x 5/8
4 " 1/4-20 x 1/2
2 " 1/4-20 x 1
2 5/16-18 x 1 1/2
4 3/8-16 x 1 1/2

EYE BOLTS

2 " 10-24 x 2

QTY.		FINISH		MTL.		DATE 3-94
DAVIS design	5900 SO. HWY 1094 PROSPECT, KY 40059 502-425-5058		SCALE	MATERIAL		PLATE 3
				DECIMALS +OR- .001 FRACTIONS +OR- .015		

MATERIALS

QTY. DESCRIPTION

ALUMINUM

1 #6061-T6 - PLATE - 1½ x 12 x 12
1 " - " - 3/16 x 8 x 8
1 " - " - 1 x 26 x 36
1 " - " - 1½ x 16 x 20
2 #319 - CASTINGS

STEEL - (STRESS PROOF)

1 #1155 - ROUND - ¼ x 36
1 " - " - ½ x 144
1 " - " - 5/8 x 36
2 " - " - 1 x 36 (G.P.)
5 " - " - 1 1/8 x 54 (G.P.)
1 " - " - 1 3/4 x 10
1 " - " - 2 x 6
1 " - " - 3 x 5

STEEL - (COLD ROLLED)

1 #1215 - ROUND - 5/32 x 12
1 " - FLAT - 3/8 x 1 3/4 x 5
1 " - " - 3/8 x 3 x 10
1 " - " - 3/8 x 4 x 10
1 " - " - ½ x 1¼ x 7
1 " - " - ½ x 1½ x 3 5/8
1 " - " - 3/4 x 1½ x 5

STEEL - (COLD ROLLED-LEADED)

1 #12L14 - ROUND - 3/4 x 144
1 " - " - 1 5/8 x 1 3/8
1 " - " - 2 3/8 x 2 3/4
1 " - SQUARE - 1½ x 2 5/8

STEEL - (HOT ROLLED)

1 #1018 - FLAT - 1/16 x 8 x 8
1 " - " - 1/8 x 4½ x 9½
1 " - " - 3/16 x 3/4 x 2 1/8
1 " - " - 3/16 x 1½ x 3½
1 " - " - 3/16 x 1½ x 8¾
1 " - " - 3/16 x 8 x 8
1 " - " - 3/16 x 1½ x 9
1 " - " - ¼ x 1 x 24
1 " - " - ¼ x 1¼ x 144
1 " - " - ¼ x 2 x 4
1 " - " - ¼ x 2 x 10
1 " - " - ¼ x 2 x 48
1 " - " - 3/8 x 1 x 8¾
1 " - " - ½ x 7 x 57
1 " - " - ½ x 7 x 62
1 " - " - 5/8 x 16 x 48
1 " - " - 3/4 x 3 x 12
1 " - " - 3/4 x 5 x 8
1 " - " - 1 x 8 x 8

STEEL - (HOT ROLLED-ANGLE)

1 #A-36 - ANGLE - 3/16 x 1½ x 1½ x 3¼
1 " - " - 3/16 x 2½ x 2½ x 144

STEEL - (TUBING)

1 #A-513 - ROUND - 3/8 O.D. x 3/16 I.D. x 72
1 #A-519 - " - 1¼ O.D. x ¾ I.D. x 24 3/8
1 " - RECTANGLE - 1/16 WL. x 1 x 2 x 8

BRONZE

1 #AMPCO-8 - FLAT - 5/16 x 1 x 4
1 " - " - ½ x 2 x 2
1 " - ROUND - 1 3/8 x 7/8

WOOD

2 MAPLE - 3/4 x 5 x 5

RUBBER

1 SURGICAL TUBE - ½ O.D. x 3/8 I.D. x 1 1/8
1 STD. HOSE 1 O.D. x 3/4 I.D. x 24
1 NEOPRENE - FLAT - 1/8 x 12 x 12

FIBERGLASS

6 YDS. CLOTH - 1 QT. RESIN

3/16

QTY.	FINISH	MTL.	DATE 3-94
DAVIS design	5900 SO. HWY 1094 PROSPECT, KY. 40059 502-425-5055	SCALE	MATERIAL
		DECIMALS ± .OR- .001 FRACTIONS ± OR- .015	PLATE 4

MATERIALS

QTY. DESCRIPTION

NUTS

8	#6-32 - PLATED
2	#10-24 - "
10	1/4-20 - "
10	1/4-28 - "
10	5/16-18 - "
50	5/16-18 - "
10	3/8-16 - "
6	3/8-24 - "
2	1/2-20 - "
12	1/2-20 - "

WASHERS

10	3/16 - FLAT - PLATED
20	1/4 - " - "
50	5/16 - " - "
50	3/8 - " - "
20	1/2 - " - "

WING NUTS

2	#8-32 - PLATED

DOWEL PINS

1	1/8 x 1
7	3/16 x 1/2
1	1/4 x 3/4

ROLL PINS

4	1/16 x 1/2
2	1/8 x 1/2
1	1/8 x 3/4
2	1/8 x 1

RIVETS

10	3/32 x 1/2 - FLAT HEAD ALUMINUM
20	1/8 x 1/4 - OVAL HEAD "

SNAP RINGS

4	1/32 x 5/16 I.D. - OUTSIDE

SPRINGS

1	1/4 DIA. x .035 WIRE x 3/16 PITCH
1	3/8 " x .042 " x .170 "
1	1 DIA. x 1/16 WIRE x 3/8 PITCH
1	3/8 " x .040 " EXTENDTION

MISCELLANEOUS

1	1/8 SQ. x 12" - KEYSTOCK
1	3/16 " x " - "
4	#01-233 - GITS OIL CUPS
3	CABLES - MOTORCYCLE THROTTLE
1	#3612 - DAZOR CORP. - LAMP
4	1 1/8 x 11 - PIANO HINGE - PLATED
2	1/16 x 3/8 x 1/4 - "O" RINGS
1	.035 - MAYLINE - CABLE
1	RUBBER CATCH
1	QT. GREY ACRYLIC ENAMEL
1	" ZINC CHROMATE PRIMER

QTY.	FINISH	MTL.		DATE	3-94
DAVIS design	5900 SO. HWY 10 2+ PROSPECT, KY 40059 502-425-5056	SCALE	MATERIAL		PLATE 5
			DECIMALS +OR- .001 FRACTIONS +OR- 015		

PART DRAWINGS

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ECCENTRIC ASSEMBLY	21
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TOP SPINDLE AND DRAWBAR	25
BOTTOM SPINDLE AND DRAWBAR	26
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SLIDE BEARING	30
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CONNECTING ROD	32
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STRIPPER FOOT	35
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BOTTOM DRIVE SHAFT	38
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PART DRAWINGS-CONTENTS

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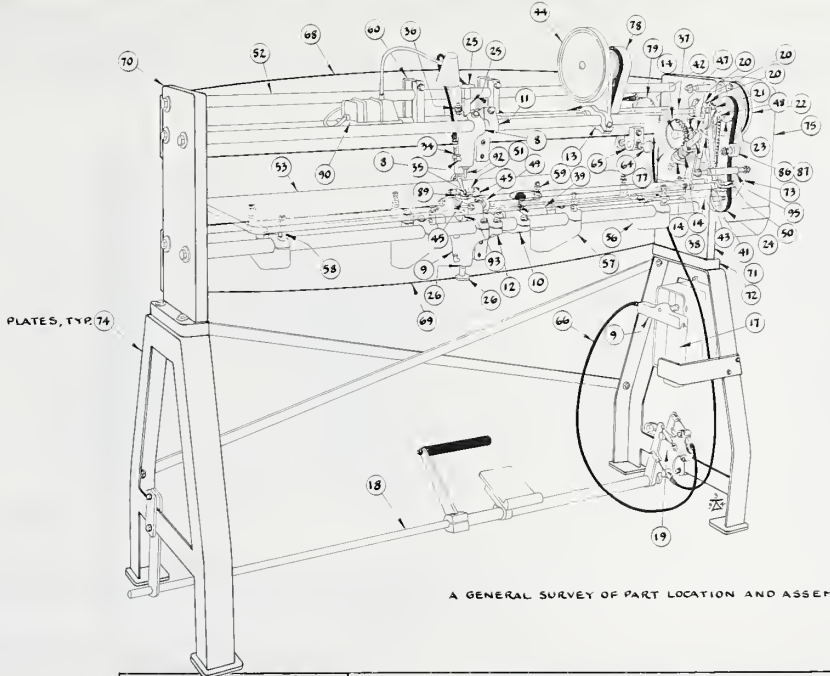

A GENERAL SURVEY OF PART LOCATION AND ASSEMBLY.

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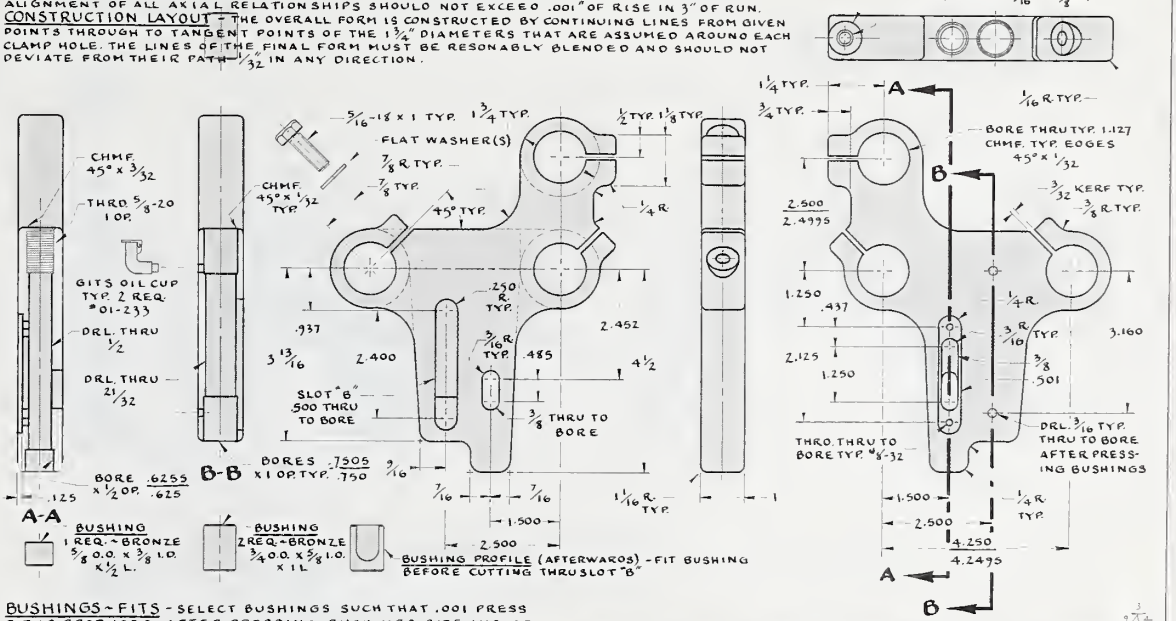
GENERAL PART LOCATION

DATE 3-94

PLATE 7

AXIAL TOLERANCE - THE AXIS (S) OF BORES A-A AND B-B MUST BE PARALLEL TO EACH OTHER AND PERPENDICULAR TO THE 1.127" DIAMETER CLAMP HOLE PATTERN. THE CLAMP HOLE PATTERN ITSELF FORMS A RIGHT TRIANGLE AND MUST ALSO CONFORM TO THE FOLLOWING TOLERANCE. MISALIGNMENT OF ALL AXIAL RELATIONSHIPS SHOULD NOT EXCEED .001" OF RISE IN 3" OF RUN.

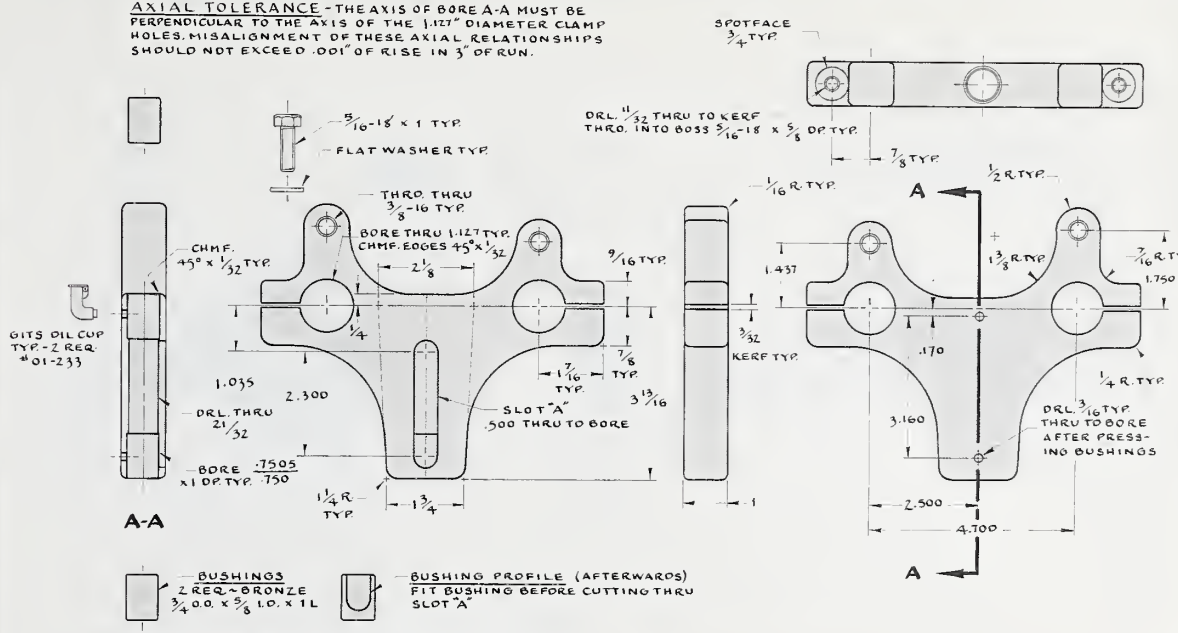
CONSTRUCTION LAYOUT - THE OVERALL FORM IS CONSTRUCTED BY CONTINUING LINES FROM GIVEN POINTS THROUGH TO TANGENT POINTS OF THE 1 3/4" DIAMETERS THAT ARE ASSUMED AROUND EACH CLAMP HOLE. THE LINES OF THE FINAL FORM MUST BE REASONABLY BLENDED AND SHOULD NOT DEVIATE FROM THEIR PATH 1/32" IN ANY DIRECTION.



BUSHINGS - FITS - SELECT BUSHINGS SUCH THAT .001 PRESS FIT IS PRODUCED. AFTER PRESSING BUSHINGS, SIZE INSIDE DIAMETERS BY BORING AND HONING. AT FINAL ASSEMBLY PROVIDE .001 CLEARANCE BETWEEN BUSHINGS, STRIPPER SHAFT AND SPINDLES.

QTY.	1 PRT.	FINISH	PAINT	MTL.	6061-T6 ALMN.	DATE	2-94
DAVIS design	5900 SO. HWY 169 PROSPECT, KY. 40059 502-425-5058	SCALE	60%	UPPER SPINDLE BLOCK			PLATE 8
				DECIMALS ±.01 FRACTIONS ±1/64			

AXIAL TOLERANCE - THE AXIS OF BORE A-A MUST BE PERPENDICULAR TO THE AXIS OF THE 1.127" DIAMETER CLAMP HOLES. MISALIGNMENT OF THESE AXIAL RELATIONSHIPS SHOULD NOT EXCEED .001" OF RISE IN 3" OF RUN.

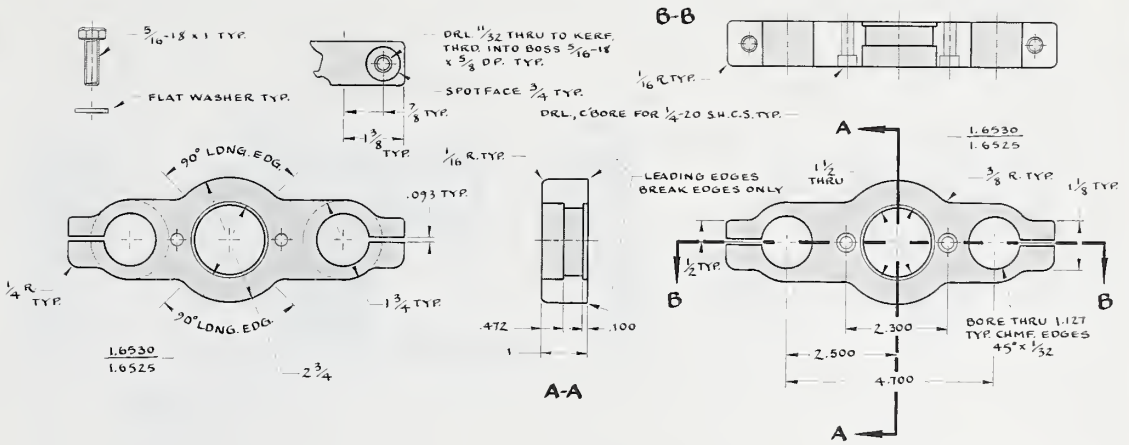


BUSHINGS
2 REQ. - BRONZE
3/4 O.D. x 5/8 I.D. x 1L

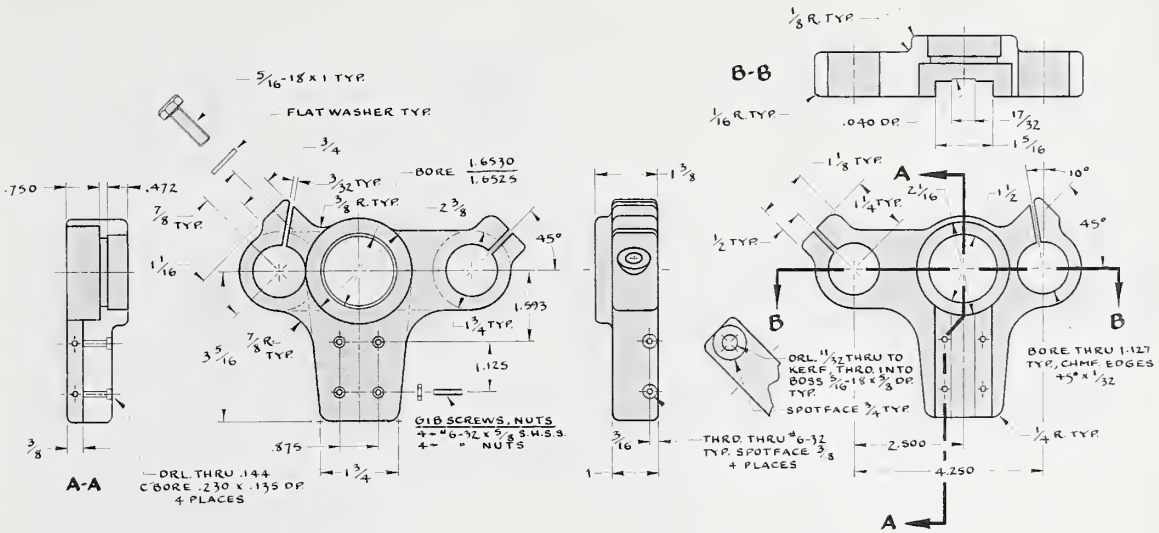
BUSHING PROFILE (AFTERWARDS)
FIT BUSHING BEFORE CUTTING THRU SLOT "A"

BUSHINGS - FITS - SELECT BUSHINGS SUCH THAT .001" PRESS FIT IS PRODUCED. AFTER PRESSING BUSHINGS, SIZE INSIDE DIAMETERS BY BORING AND HONING. AT FINAL ASSEMBLY PROVIDE .001" CLEARANCE BETWEEN BUSHINGS, STRIPPER SHAFT AND SPINDLES.

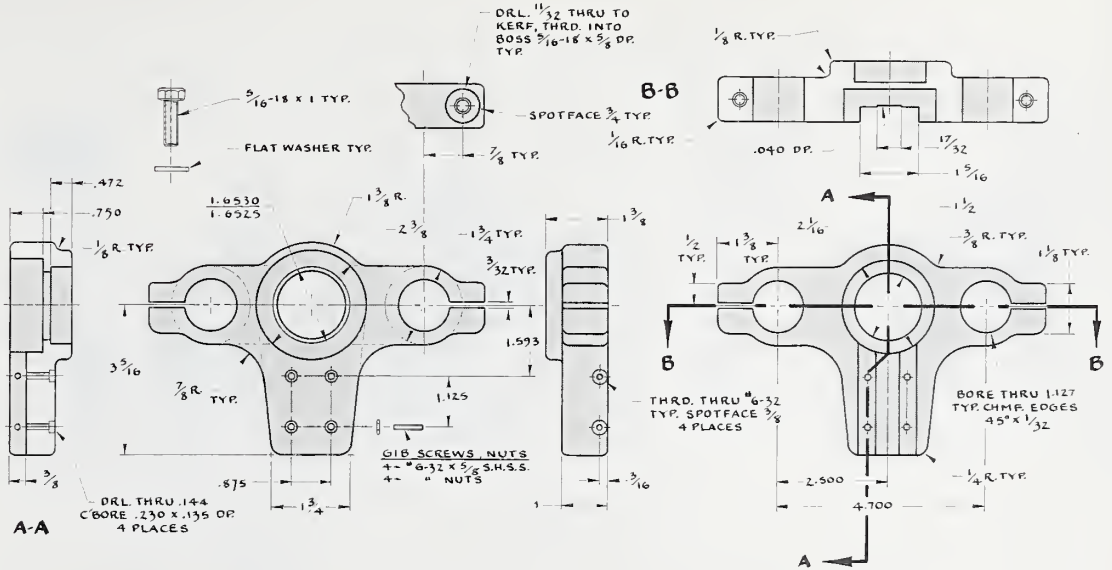
QTY.	1 PRT.	FINISH	PAINT	MTL.	6061-T6 ALMN	DATE	2-94
DAVIS design	5900 SO. HWY 109 PROSPECT, KY. 40059 502-425-5058	SCALE	60%	LOWER SPINDLE BLOCK		PLATE	9
				DECIMALS +OR-.001 FRACTIONS +OR-.015			



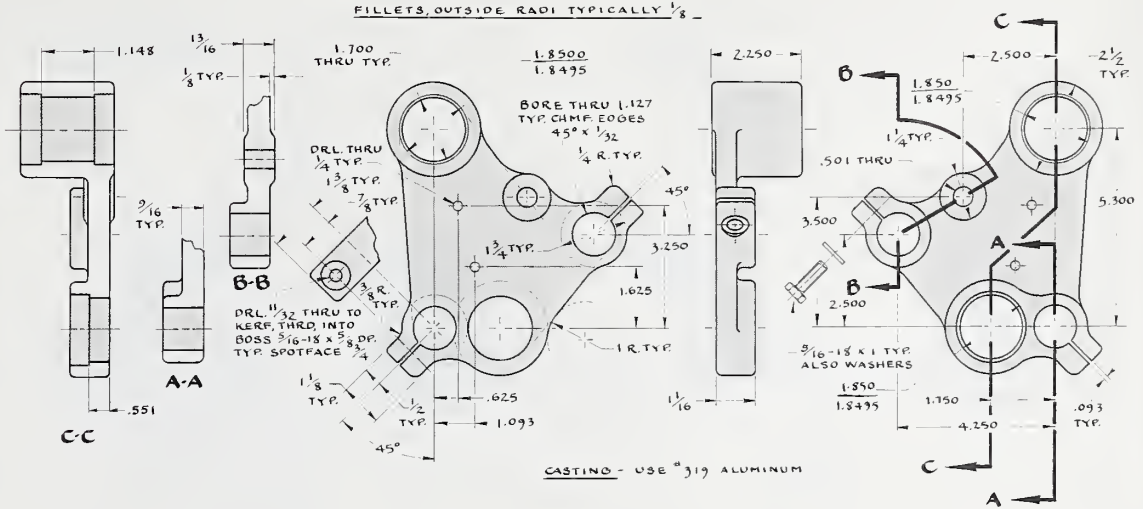
QTY 1 PRT.	FINISH	PAINT	MTL. 6061-T6 ALMN.	DATE 2-94			
DAVIS design	5900 SR.HWY 1094 PROSPECT, KY. 40059 502-426-5055	SCALE 60%	GEARBOX BLOCK	PLATE 10			
			DECIMALS ±.OR±.001 FRACTIONS ±OR.015				



QTY.	1 PRT.	FINISH	PAINT	MTL	6061-T6 ALMN.	DATE	2-94
DAVIS design	5900 BO. HWY 1694 PROSPECT, KY. 40059 502-425-5055		SCALE	UPPER CRANK BLOCK		PLATE	11
			60%	DECIMALS ± .OR- .001 FRACTIONS ± OR- .015			



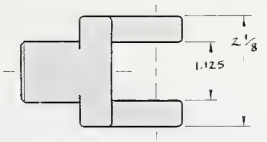
QTY	1 PRT.	FINISH	PAINT	MTL.	6061-T6 ALMN	DATE	2-94
DAVIS design	5900 SO. HWY 1004 PROSPECT, KY. 40059 502-425-5055	SCALE	60%	LOWER CRANK BLOCK		PLATE	12
		DECIMALS ±.OR-.001 FRACTIONS ±OR-.015					

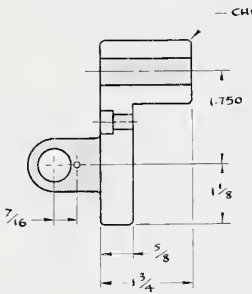


QTY.	1 PRT.	FINISH	PAINT	MTL.	ABOVE	DATE	3-94
DAVIS design	5900 SO. HWY 1094 PROSPECT, KY. 40059 502-425-3055		SCALE 50%	HANDWHEEL CARRIER			PLATE 13
				DECIMALS +OR-.001 FRACTIONS +OR-.015			

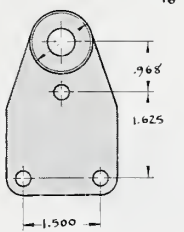
AXIAL TOLERANCE - MISALIGNMENT OF PERPENDICULAR AXIAL RELATIONSHIPS, a^1 AND a^2, SHOULD NOT EXCEED .001" OF RISE IN 3" OF RUN.

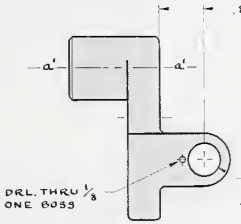
FILLETS, OUTSIDE RADI TYPICALLY 1/16

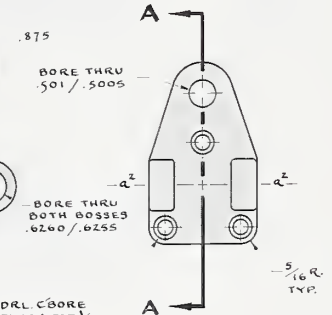




A-A

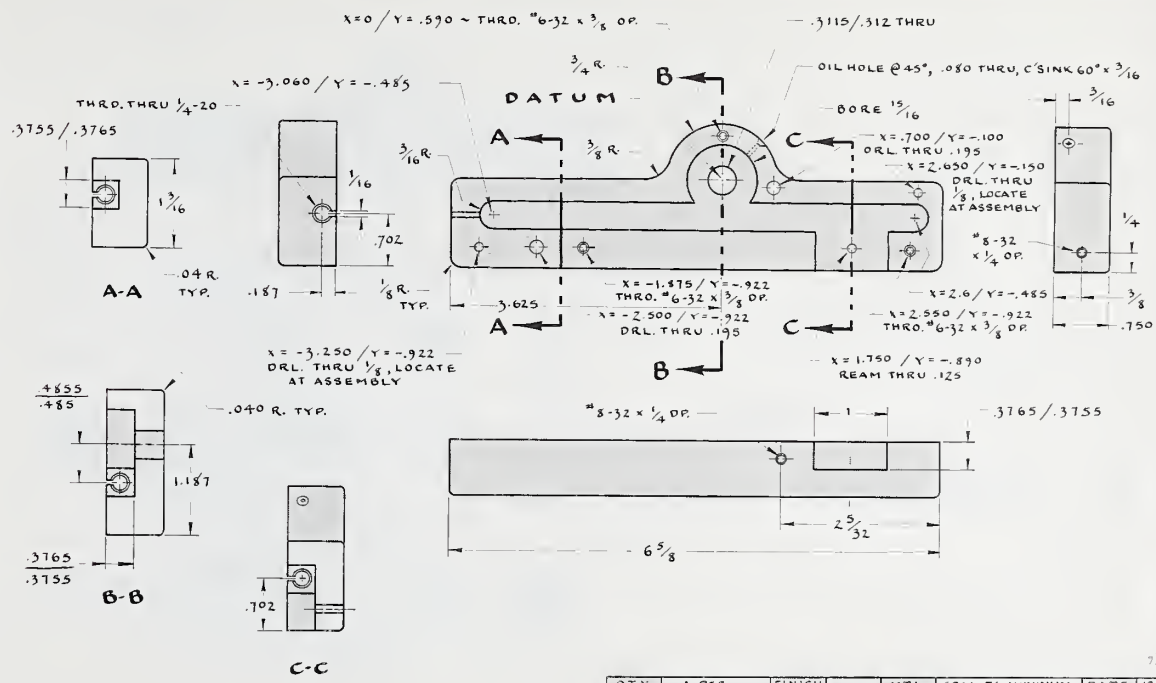




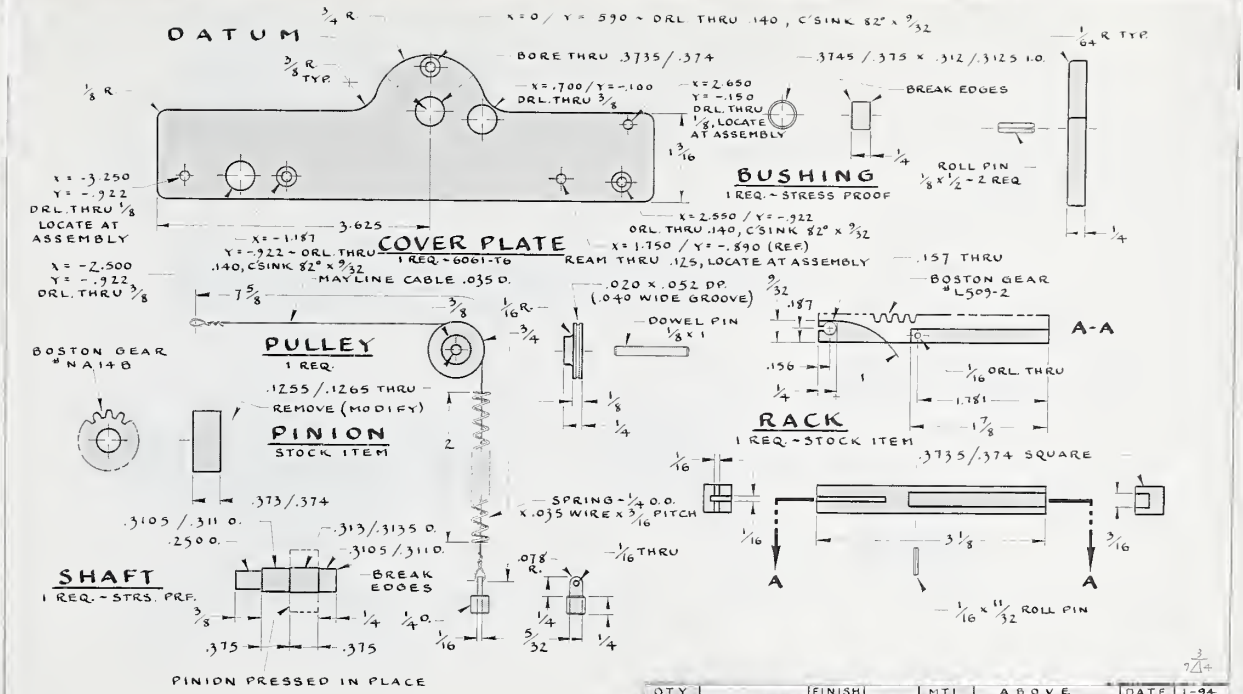


CASTING - USE # 319 ALUMINUM

QTY.	1 PRT.	FINISH	PAINT	MTL.	ABOVE	DATE 3-94
DAVIS design	5300 SO. HWY 1004 PROSPECT, KY 40059 502-425-5055		SCALE 70%	WORMGEAR CASEMENT		PLATE 14
				DECIMALS ±.OR±.001 FRACTIONS ±.OR±.015		



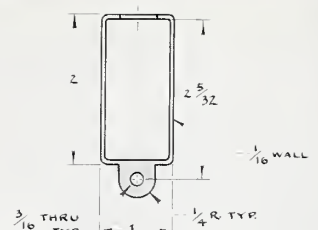
QTY. 1 PCS.	FINISH		MTL. 6061-T6 ALUMINUM	DATE 12-93
DAVIS Design 5900 S.O. HWY 1694 PROSPECT, KY. 40059 502-425-5058	SCALE 100%	SPEED CONTROL HOUSING	PLATE 15
		DECIMALS +OR-.001 FRACTIONS +OR-.015	

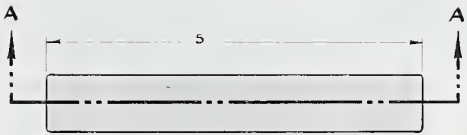


QTY.	FINISH	MTL.	ABOVE	DATE	1-94
DAVIS design	5900 S.R. HWY 1934 PROSPECT, KY 40059 502-425-5056	SCALE	100%	SPEED CONTROL MISC.	PLATE 16
		DECIMALS ± .01 FRACTIONS ± 1/64			

COUNTERWEIGHT CAN

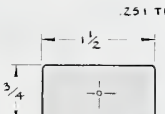
1 REQ ~ H.R.S. (PAINT FLAT BLACK)

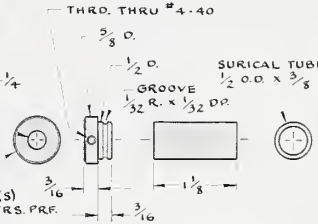




COUNTERWEIGHT

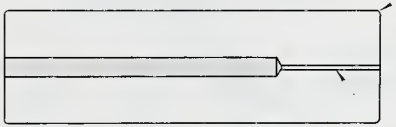
1 REQ. ~ H.R.S.





COUPLING ASSEMBLY

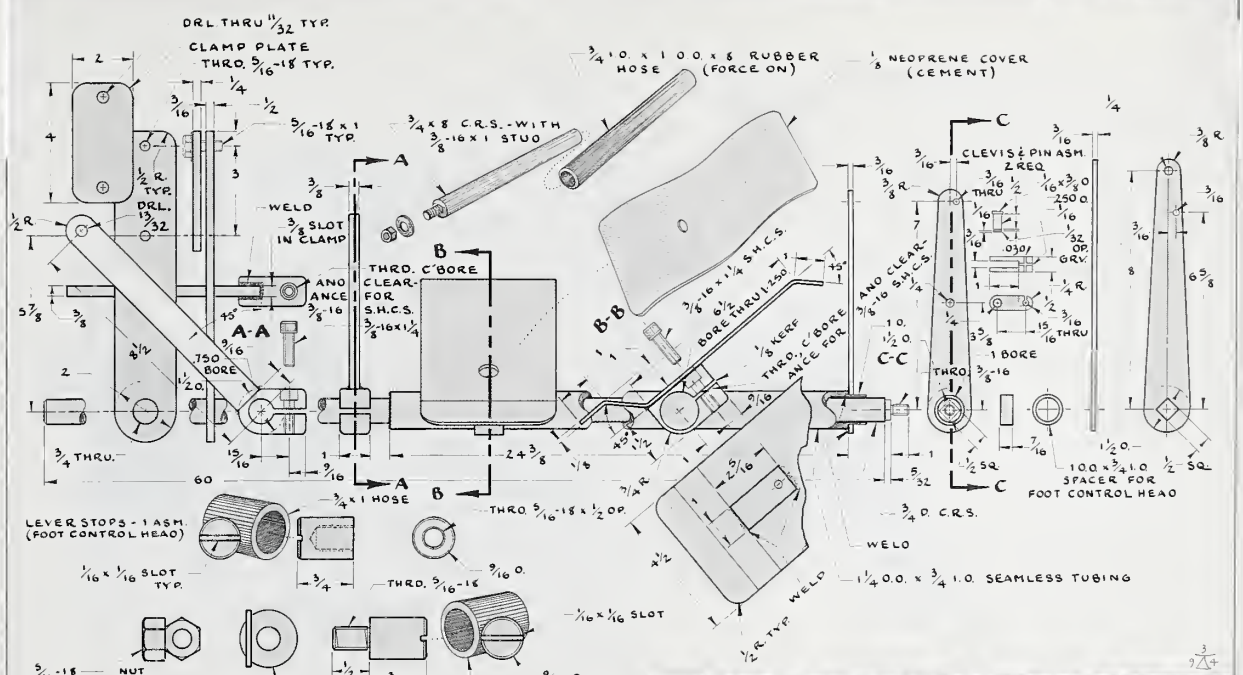
1 REQ.



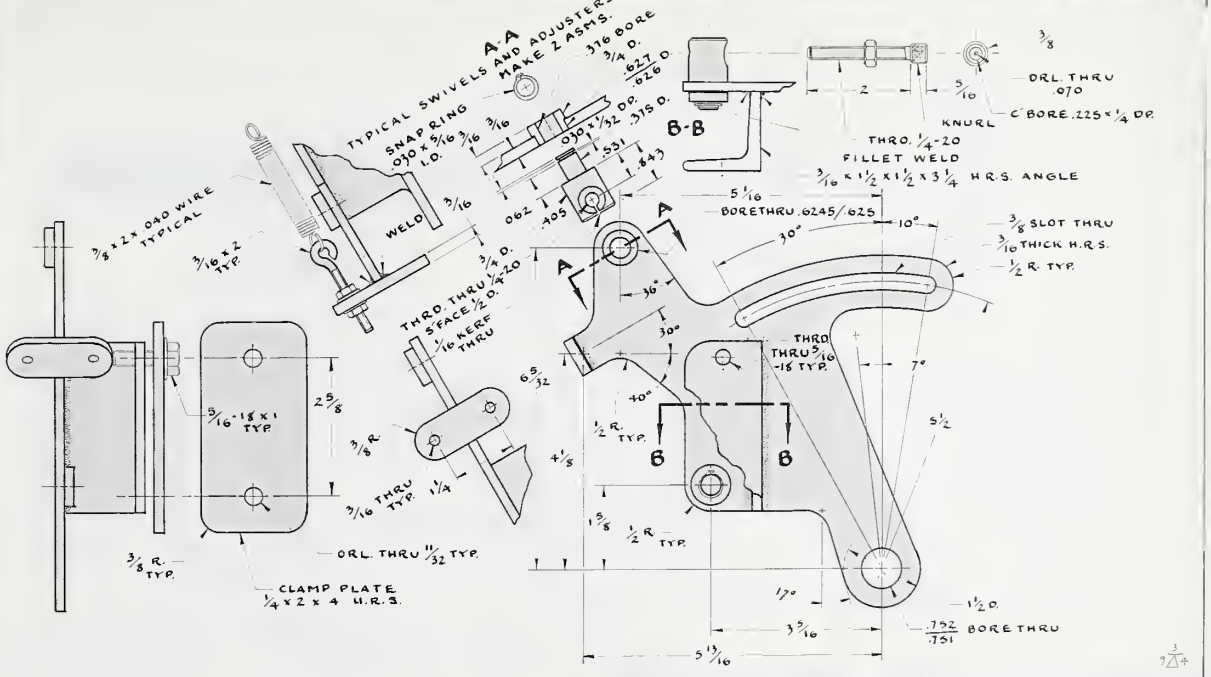
A-A

3/4

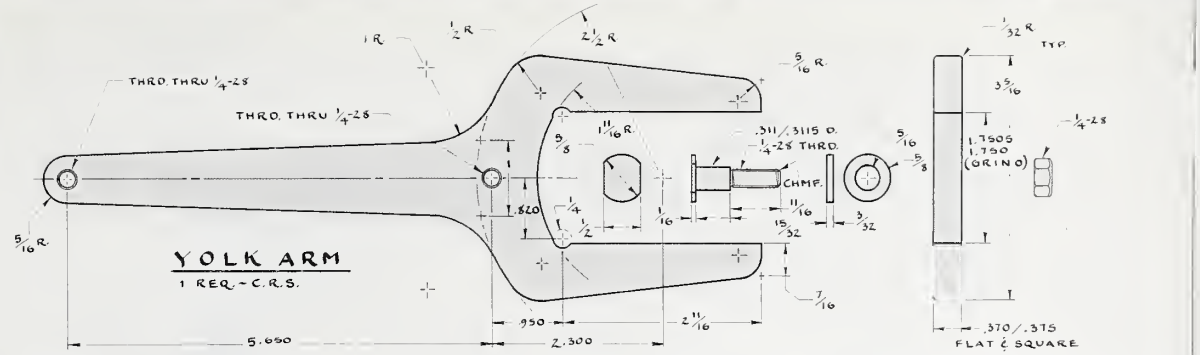
QTY.	FINISH		MTL. ABOVE	DATE	1-94
DAVIS design	5900 SO. HWY 1094 PROSPECT, KY. 40059 502-425-5055	SCALE 100%	SPEED CONTROL MISC.	PLATE	17
			DECIMALS ± .OR ± .001 FRACTIONS ± 0R ± .015		



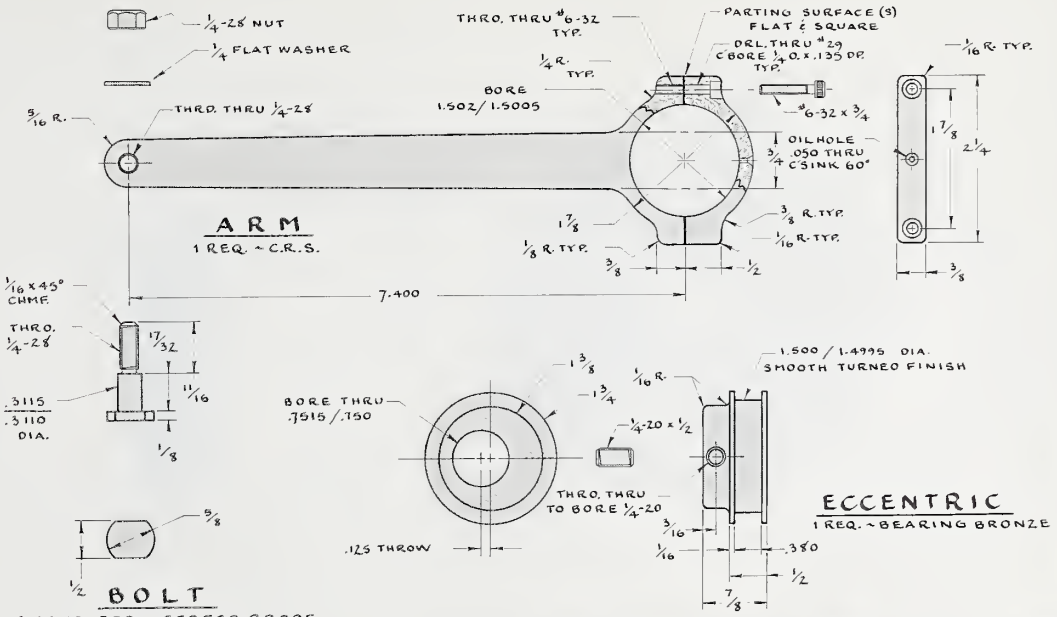
QTY.	1 ASM.	FINISH	PAINT	MTL.	H.R.S.-C.R.S.	DATE	3-94
DAVIS design	5900 SO. HWY 169 PROSPECT, KY 40059 502-228-5058	SCALE	40%	FOOT CONTROL ASSEMBLY		PLATE	18
		DECIMALS +OR- .001 FRACTIONS +OR- 015					



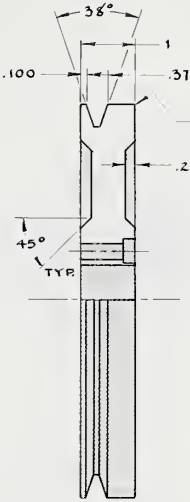
QTY.	1 ASM.	FINISH	PAINT	MTL.	H.R.S.	DATE	8-93
DAVIS design	5900 SO. HWY 1004 PROSPECT, KY. 40059 502-425-5058		SCALE	FOOT CONTROL HEAD			PLATE
			70%	DECIMALS ±.OR-.001 FRACTIONS ±.OR-.015			19



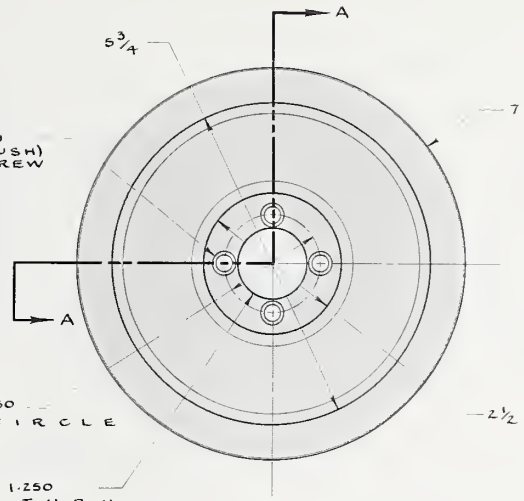
QTY. 1 ABOVE	FINISH	MTL. ABOVE	DATE 12-93		
DAVIS design	5900 SO. HWY 169 PROSPECT, KY. 40059 502-425-5055	SCALE 100%	VARIABLE ECCENTRIC ASM.	PLATE 20	
			DECIMALS +OR- .001 FRACTIONS +OR- .015		



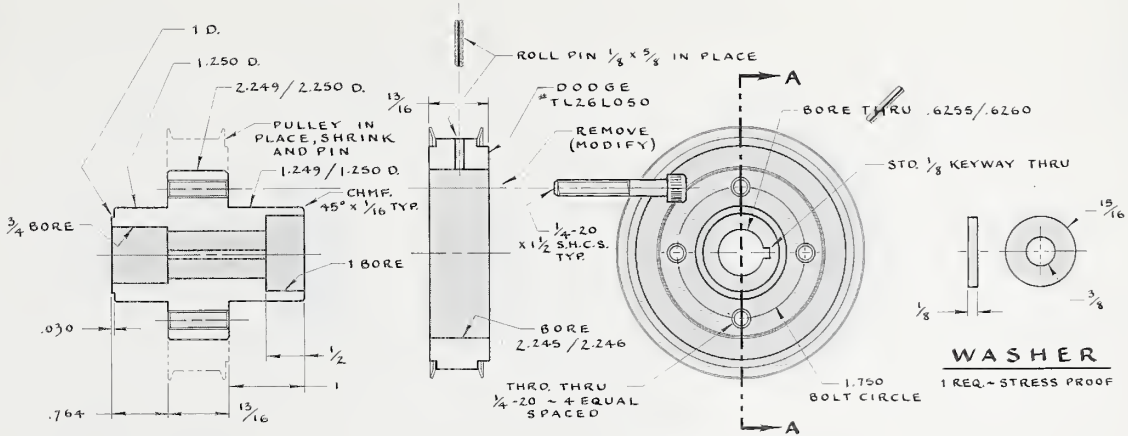
QTY. ABOVE	FINISH		MTL. ABOVE	DATE	12-93
DAVIS design	5900 SO HWY 1094 PROSPECT, KY. 40059 502-228-5055	SCALE 100%	ECCENTRIC ASM.		PLATE 21
			DECIMALS ±.OR-.001 FRACTIONS ±.OR-.015		



A-A



QTY. 1 PCS.	FINISH	PAINT	MTL.	H.R.S.	DATE	7-93
DAVIS design	5900 SO. HWY 10/14 PROSPECT, KY. 40059 502-425-5055	SCALE	75%	FLYWHEEL		PLATE 22
			DECIMALS ±0R-.001 FRACTIONS ±0R-.015			



HUB

1 REQ ~ STRESS PROOF

DYNA-SYNC PULLEY

1 REQ ~ STOCK ITEM

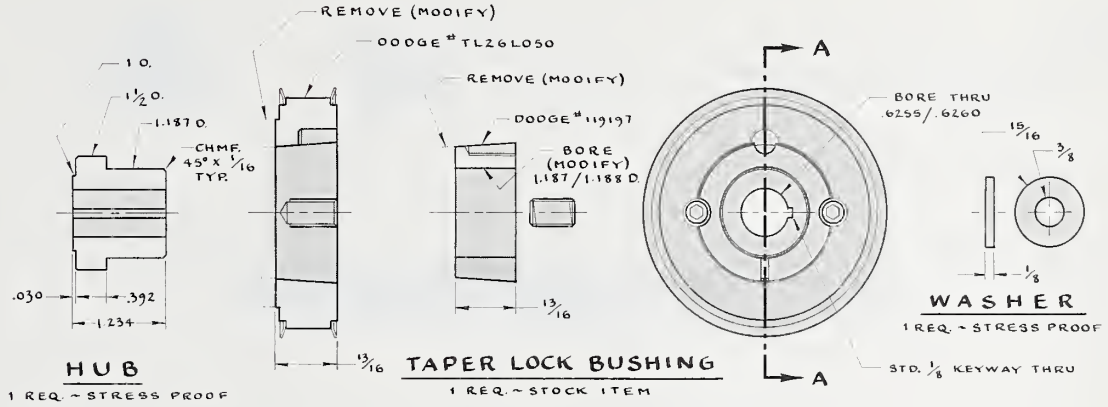
WASHER

1 REQ ~ STRESS PROOF

SECTION (S) ~ A-A

3
1△4

QTY. 1	FINISH	MTL. ABOVE	DATE 3-94	
DAVIS design 5900 SO. HWY 1624 PROSPECT, KY 40059 502-425-5058	SCALE 100%	T. TIMING HUB ASM.	PLATE 23	
		DECIMALS +OR-.001 FRACTIONS +OR-.015		



HUB

1 REQ. ~ STRESS PROOF

TAPER LOCK BUSHING

1 REQ. ~ STOCK ITEM

WASHER

1 REQ. ~ STRESS PROOF

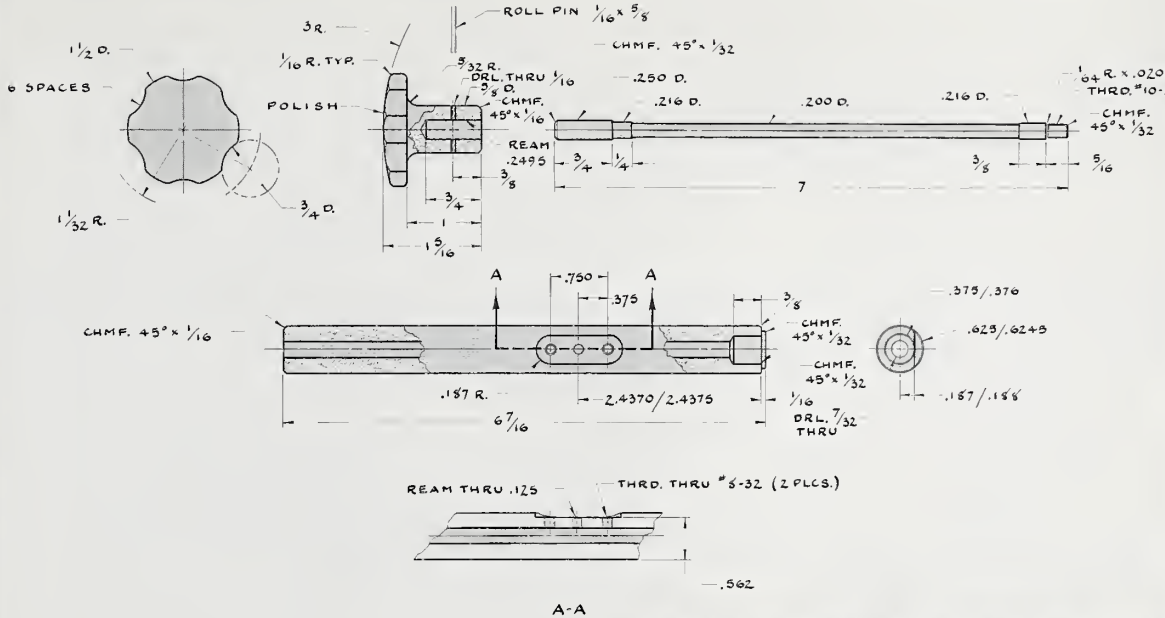
DYNA-SYNC PULLEY

1 REQ. ~ STOCK ITEM

SECTION(S) ~ A-A

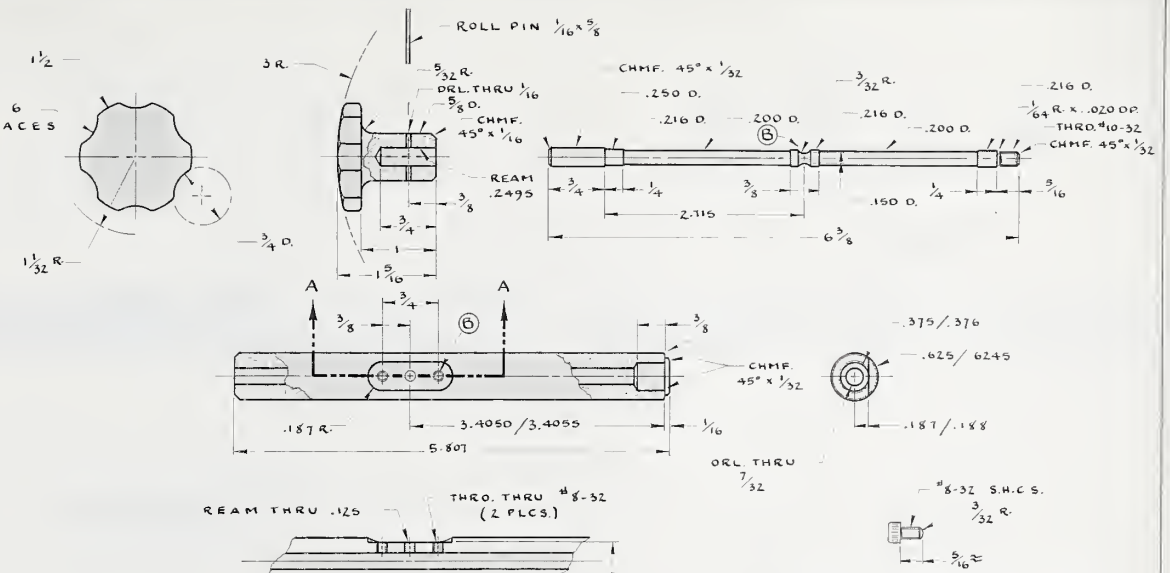
3
9△+

QTY.	FINISH		MTL. ABOVE	DATE	3-94
DAVIS design	5900 SOUTH HWY 1094 PROSPECT, KY. 40059 502-429-5055	SCALE 100%	B. TIMING HUB ASM.	PLATE	24
			DECIMALS ±.OR-.001 FRACTIONS ±.OR-.015		



3/14

QTY. 13 PCS - 2 PRTS	FINISH	MTL	KNOB-ALMN, STRS. PRF	DATE	3/92
DAVIS design	3900 SOUTHWYLIE/14 PROSPECT, KY 40059 502-425-5058	SCALE	100%	T. SPINDLE & DRAWBAR	PLATE 25
			DECIMALS +OR- .001 FRACTIONS +OR .015		

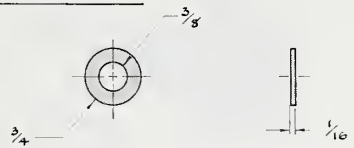


COMBINATION JOURNAL BOLT AND DRAWBAR KEEPER BOLT. TO BE PLACED AT "B". CUT TO LENGTH SUCH THAT JOURNAL IS CLAMPED AND DRAWBAR IS SECURED AND FREE TO ROTATE.

3
9 4

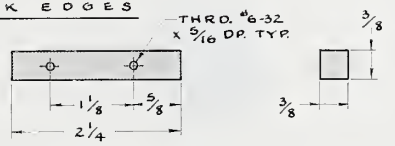
QTY.	+ PCS. ~ 2 PRTS	FINISH		MTL	KNOB-ALUM. ~ STRS. PRF.	DATE	12-93
DAVIS design	5900 SOUTHWEST 103rd PROSPECT, KY. 40059 502-425-5055		SCALE	B. SPINDLE & DRAWBAR		PLATE	26
			100%	DECIMALS + OR - .001 FRACTIONS + OR - 015			

BREAK EDGES

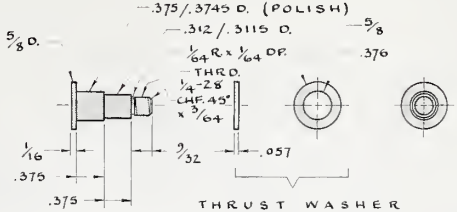


QTY. 2 PRTS.	FINISH		MTL. C.R.S.	DATE 12/92
DAVIS design 5900 SO.HWY 1094 PROSPECT,KY. 40059 502-425-5058	SCALE 100%	CRANK WASHER	DECIMALS +OR-.001 FRACTIONS +OR-.015	PLATE 27

BREAK EDGES



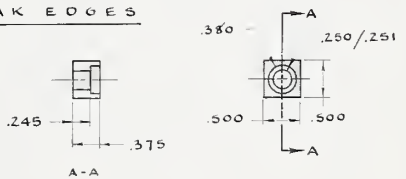
QTY. 2 PRTS.	FINISH		MTL. C.R.S.	DATE 12/92
DAVIS design 5900 SO.HWY 1094 PROSPECT,KY. 40059 502-425-5058	SCALE 100%	SLIDE BLOCK	DECIMALS +OR-.001 FRACTIONS +OR-.015	PLATE 28



BREAK EDGES

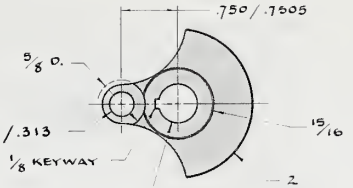
QTY. 4 PRTS.	FINISH		MTL. STRESS PROOF	DATE 12/92
DAVIS design 5900 SO.HWY 1094 PROSPECT,KY. 40059 502-425-5058	SCALE 100%	CRANK JOURNAL	DECIMALS +OR-.001 FRACTIONS +OR-.015	PLATE 29

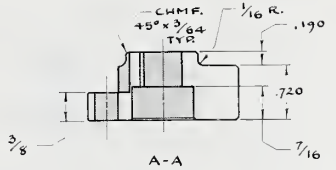
BREAK EDGES

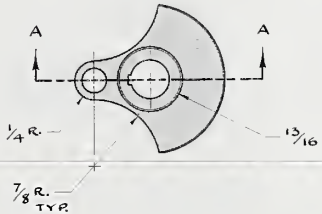


3/4

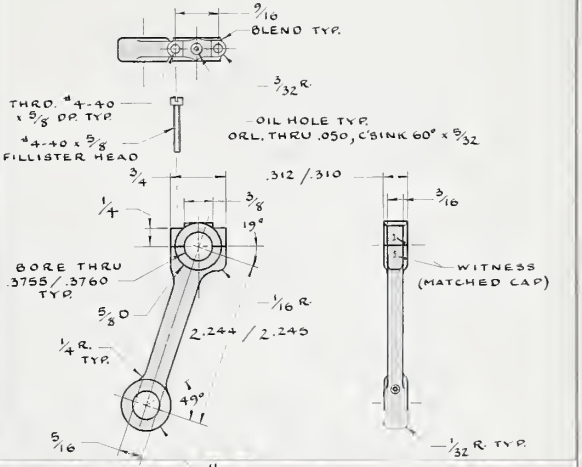
QTY. 2 PRTS.	FINISH		MTL. AMPCO 18	DATE 12/92
DAVIS design 5900 SO.HWY 1094 PROSPECT,KY. 40059 502-425-5058	SCALE 100%	SLIDE BEARING	DECIMALS +OR-.001 FRACTIONS +OR-.015	PLATE 30



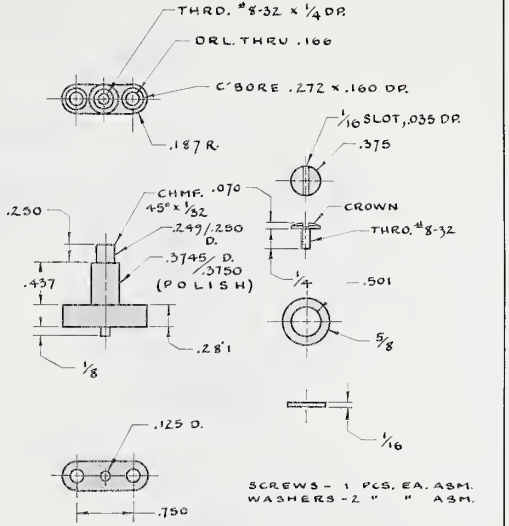




QTY. 2 PRTS.	FINISH		MTL. STRESS PROOF		DATE 12/92		
DAVIS design	5900 SO. HWY 1094 PROSPECT, KY 40059 502-425-5058	SCALE 100%	CRANK	DECIMALS ±.OR-.001 FRACTIONS ±OR-.015	PLATE 31		

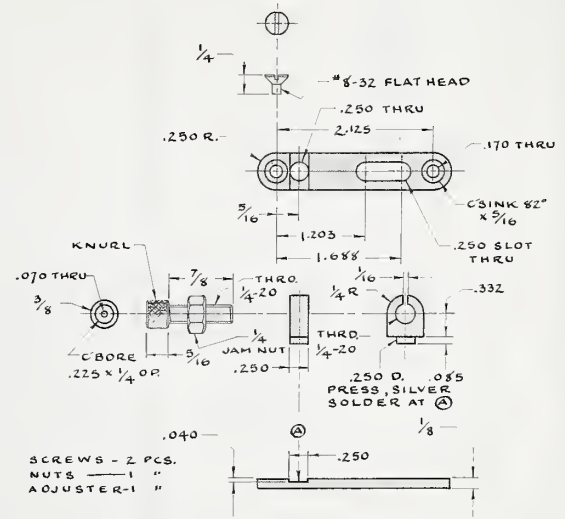


QTY. 2 PRTS.	FINISH		MTL. ALMN. BRNZ. AMPCO 18		DATE 12/92		
DAVIS design	5900 SO. HWY 1094 PROSPECT, KY 40059 502-425-5058	SCALE 100%	CON. ROD	DECIMALS ±.OR-.001 FRACTIONS ±OR-.015	PLATE 32		



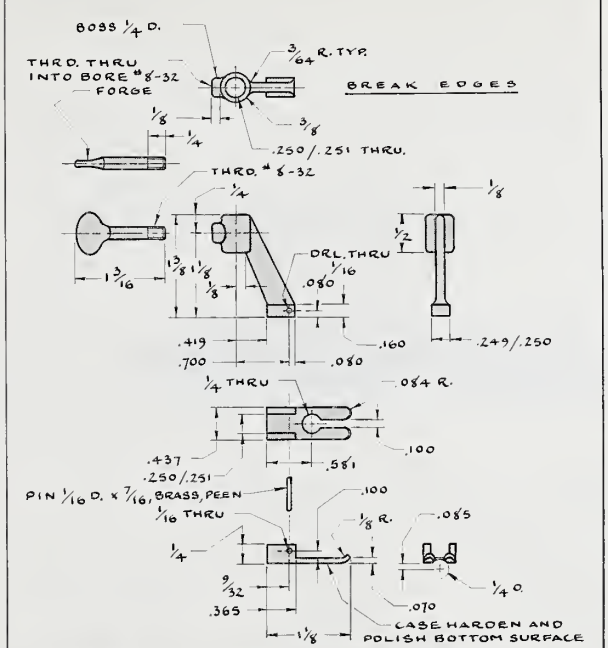
BREAK EDGES

QTY. 2 ASMS., 8 PCS.	FINISH		MTL. STRESS PROOF	DATE 12/92	
DAVIS design 5900 SO. HWY 1094 PROSPECT, KY. 40059 502-425-5056	SCALE 100%	SPINDLE JOURNAL			PLATE 33
		DECIMALS +OR-.001 FRACTIONS +OR-.015			

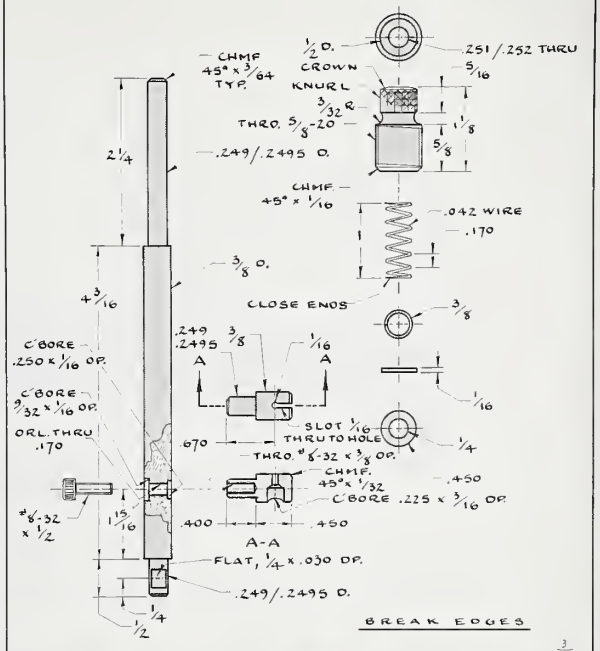


BREAK EDGES

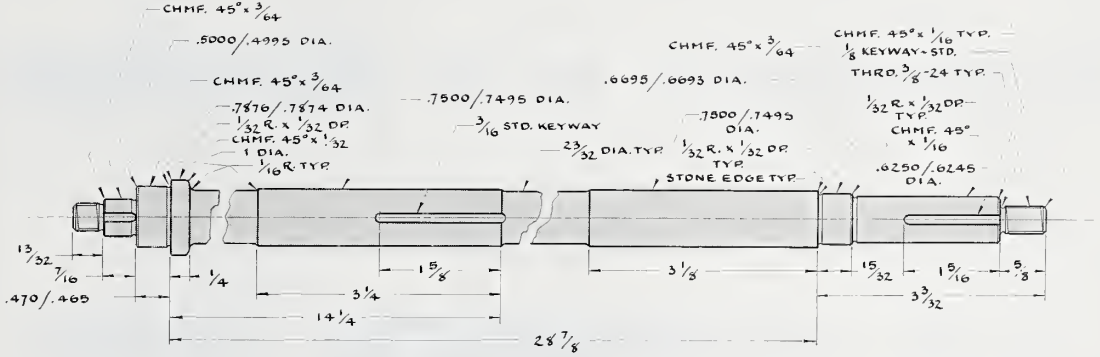
QTY. 1 ASM. 6 PCS.	FINISH PLATE		MTL. C.R.S.	DATE 12/92	
DAVIS design 5900 SO. HWY 1094 PROSPECT, KY. 40059 502-425-5056	SCALE 100%	STRIPPER GUIDE			PLATE 34
		DECIMALS +OR-.001 FRACTIONS +OR-.015			



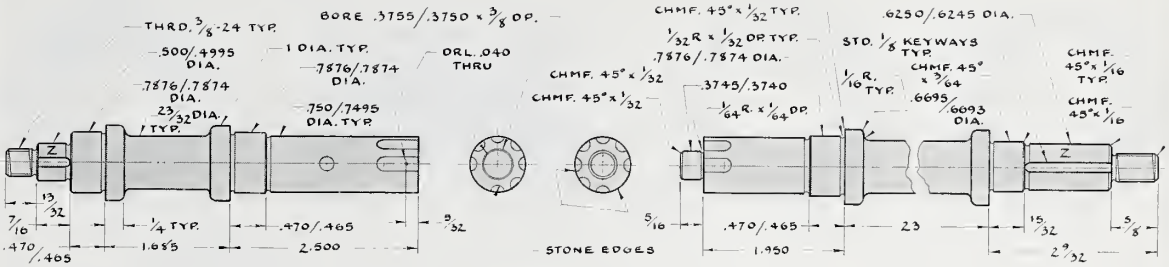
QTY.	1 ASM., 4 PCS.	FINISH		MTL.	STRESS PROOF	DATE	12/92
DAVIS design	5900 SO. HWY 1094 PROSPECT, KY. 40059 502-425-5056	SCALE	100%	STRIPPER FOOT	DECIMALS +OR-.001 FRACTIONS +OR-.015	PLATE	35

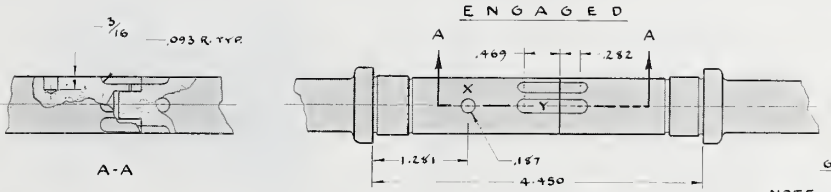


QTY.	1 ASM., 6 PCS.	FINISH		MTL.	STRESS PROOF	DATE	12/92
DAVIS design	5900 SO. HWY 1094 PROSPECT, KY. 40059 502-425-5056	SCALE	100%	STRIPPER SHAFT	DECIMALS +OR-.001 FRACTIONS +OR-.015	PLATE	36



QTY.	1 PRT.	FINISH	PAINT	MTL.	STRESS PROOF	DATE	2/92
DAVIS design	5900 SO. HWY 1094 PROSPECT, KY. 40059 502-425-5055		SCALE 100%	T. DRIVE SHAFT			PLATE 37
				DECIMALS ±.01 FRACTIONS ±.015			



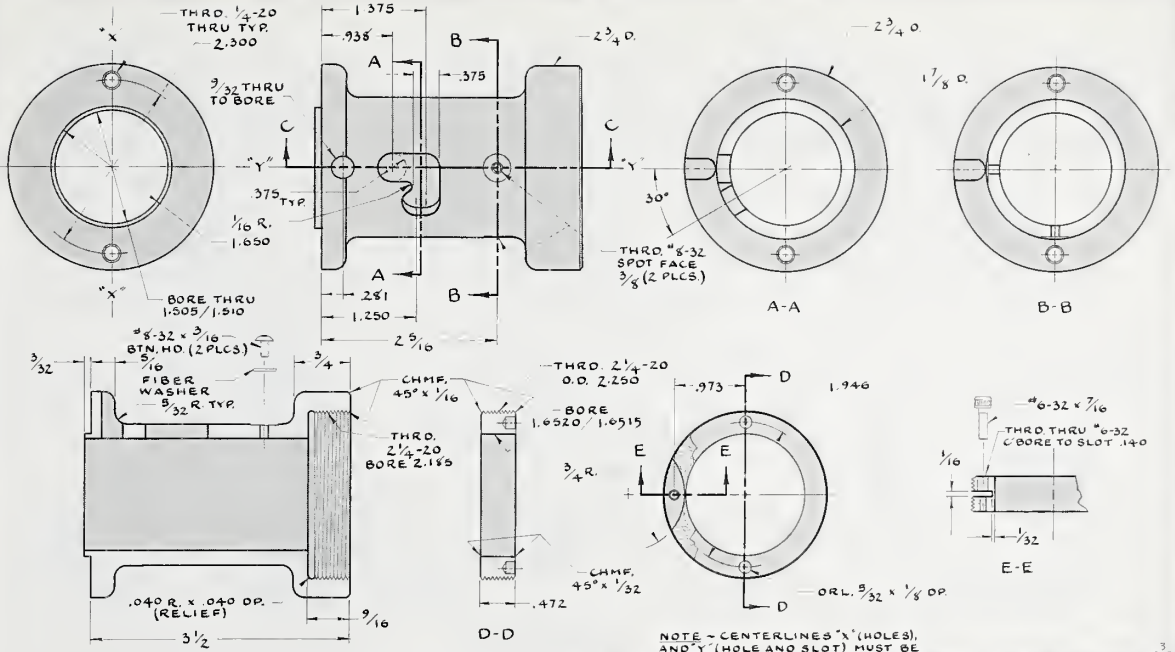


NOTE ~ IT IS ADVISED TO MACHINE SHAFT IN ONE PIECE, THEN PART AND FORM PILOT AND PILOT HOLE. AS ENGAGED - HOLE "X" LEADING FLUTE "Y" AND KEYWAYS "Z" MUST BE ON THE SAME CENTERLINE, HAVING A RADIAL TOLERANCE OF +/- 5 MINUTES.

NOTE ~ FLAME HARDEN FLUTE AND PILOT AREA TO Rc. 40/55. - DRAW, CLEAN AND POLISH.

NOTE ~ MACHINED FLUTES MUST HAVE A GOOD SURFACE FINISH THAT WILL ENABLE A SMOOTH SLIDING MOTION OF DRIVE PINS.

QTY.	2 PCS. ~ 1 PRT.	FINISH	PAINT	MTL.	STRESS PROOF	DATE	2/92
DAVIS design	5900 30 HWY 1694 PROSPECT, KY. 40059 502-425-5056	SCALE	100%	B. DRIVE SHAFT			PLATE 38
				DECIMALS - OR - 001 FRACTIONS - OR - 015			



NOTE ~ IT IS ADVISED TO COMPLETE THREADED RING AND PRESS BEARING FIRST. THEN FREELY FIT RING TO HOUSING.

NOTE ~ CENTERLINES "X" (HOLES), AND "Y" (HOLE AND SLOT) MUST BE PERPENDICULAR WITHIN +/- 5 MIN.

3/2 3/4

QTY.	2 PCS. 1 PRT.	FINISH	PAINT	MTL.	STRESS PROOF	DATE	3-92

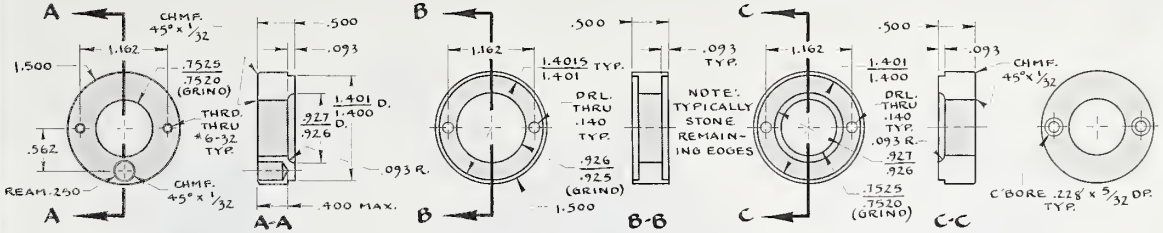
DAVIS design — 5900 SOHWY 1004 PROSPECT, KY. 40059 — 502-426-5055

SCALE 100%

GEARBOX HOUSING

DECIMALS +OR- .001 FRACTIONS +OR .015

PLATE 39

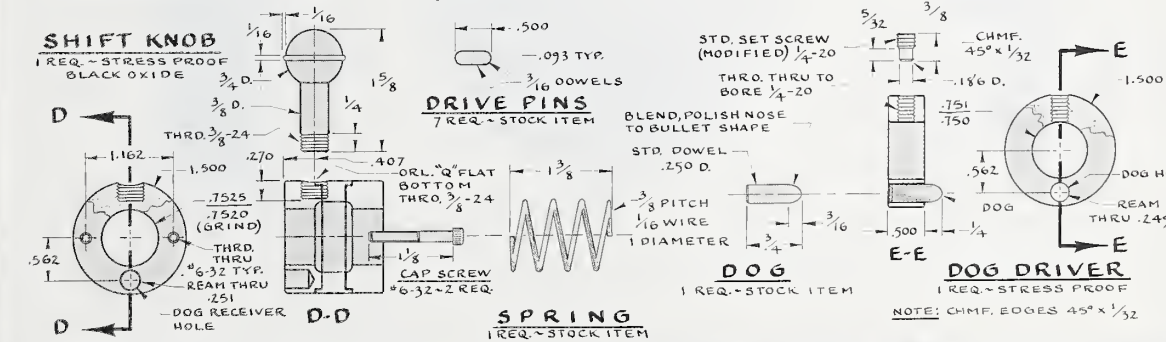


LEFT SEGMENT
1 REQ. ~ D-2 ~ HARDEN Rc 60

INNER SEGMENT
1 REQ. ~ D-2 ~ HARDEN Rc 60

RIGHT SEGMENT
1 REQ. ~ D-2 ~ HARDEN Rc 60

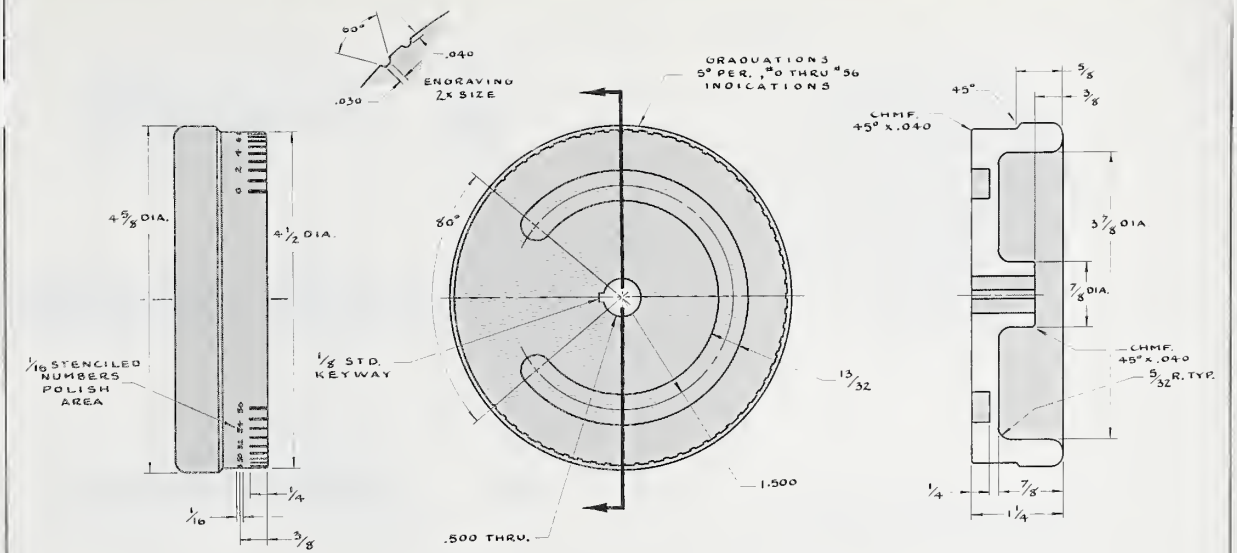
NOTICE: THE AXIS(S) OF BOTH THE DOG HOLE AND THE THREADED SET SCREW HOLE OF THE DOG DRIVER AND THE SHIFT KNOB THREADED HOLE AND THE DOG RECEIVER HOLE OF THE SYNCHRONIZER ASSEMBLY MUST COINCIDE AND MAINTAIN A RADIAL TOLERANCE OF + OR - 5 MINUTES OF A DEGREE.



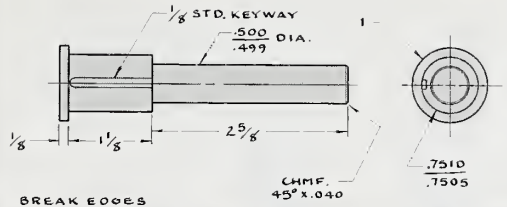
SYNCHRONIZER ASSEMBLY

NOTICE: BEFORE HARDENING SEGMENTS, ASSEMBLE SYNCHRONIZER, LOCATE DRILL AND TAP 3/8-24 HOLE

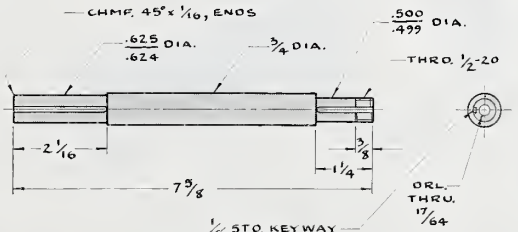
QTY.	FINISH	MTL.	ABOVE	DATE	2-94
DAVIS design 5900 SO. HWY 1934 PROSPECT, KY. 40059 502-425-5055		SCALE 100%	SYNCHRONIZER ASM.		PLATE 40
			DECIMALS +OR-.001 FRACTIONS +OR-.015		



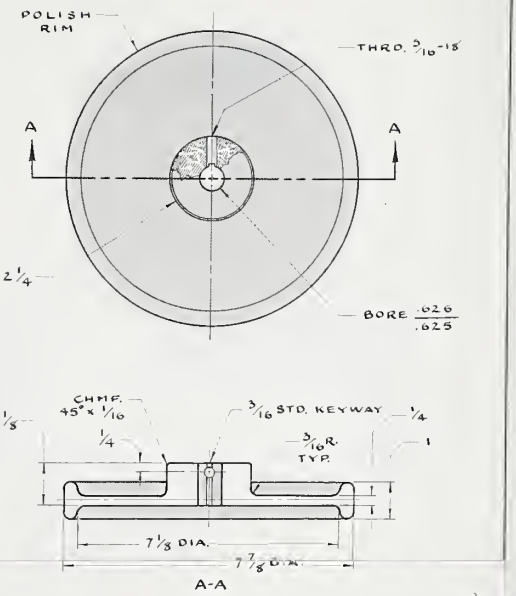
QTY. 1 PRT.	FINISH POLISH	MTL. 6061-T6	DATE 12-92
DAVIS design	5900 SO. HWY 1094 PROSPECT, KY. 40059 502-425-5058	SCALE 100%	TRANSPORT WHEEL	PLATE 41
		DECIMALS +OR- .001 FRACTIONS +OR- .015	



QTY. 1 PRT.	FINISH		MTL. C.R.S.	DATE 1/92
DAVIS design 5900 SO. HWY 1094 PROSPECT, KY. 40059 502-425-5056	SCALE 100%	W. GEAR SHAFT	DECIMALS +OR-.001 FRACTIONS +OR-.015	PLATE 42

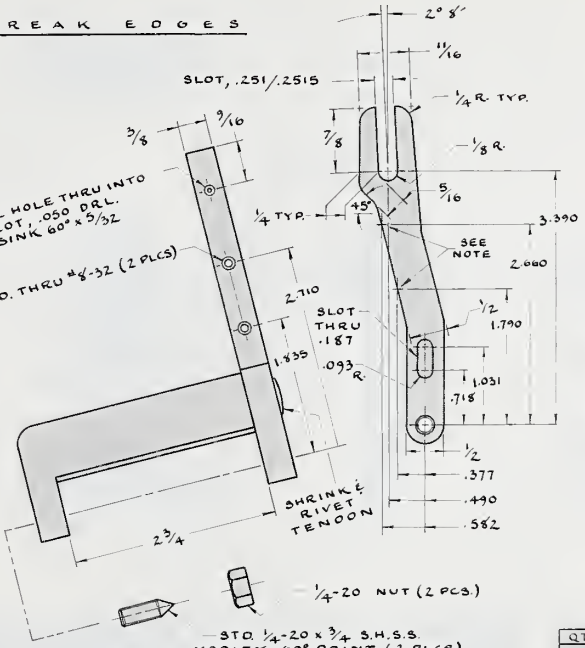


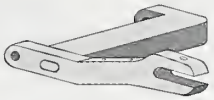
QTY. 1 PRT.	FINISH		MTL. C.R.S.	DATE 1/92
DAVIS design 5900 SO. HWY 1094 PROSPECT, KY. 40059 502-425-5056	SCALE 60%	W. SHAFT	DECIMALS +OR-.001 FRACTIONS +OR-.015	PLATE 43



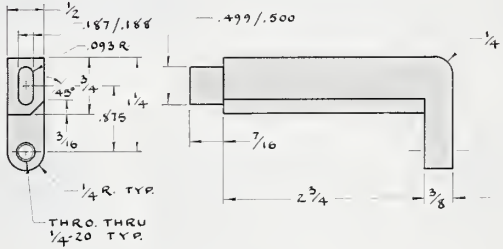
QTY. 1 PRT.	FINISH		MTL. ALMN 6061-T651	DATE 1/92
DAVIS design 5900 SO. HWY 1094 PROSPECT, KY. 40059 502-425-5056	SCALE 50%	HANDWHEEL	DECIMALS +OR-.001 FRACTIONS +OR-.015	PLATE 44

BREAK EDGES



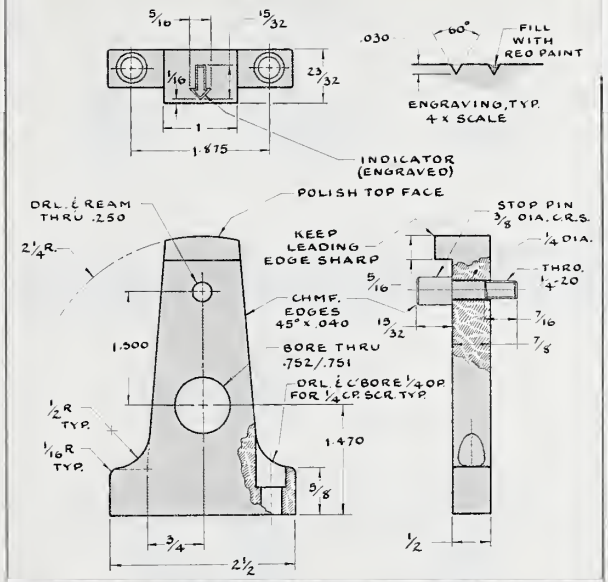


ROCKER LINK

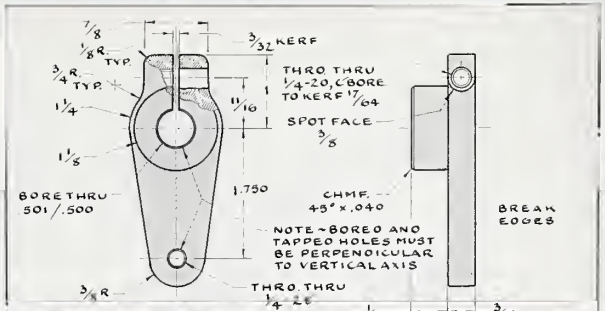


NOTE ~ RAMP CHECK POINTS. EDGE (SURFACE) MUST PASS THRU POINTS.

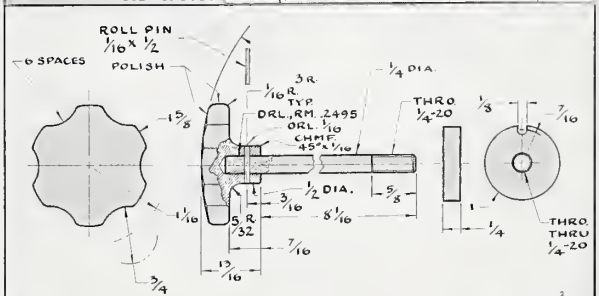
QTY. 1 ASM. 6 PCS.	FINISH	PAINT	MTL. C.R.S.		DATE	12/92
DAVIS design 5900 SO HWY 109 PROSPECT, KY 40059 502-425-5055	SCALE	100%	ROCKER LINK			PLATE 45
	DECIMALS +OR- .001 FRACTIONS +OR- .015					



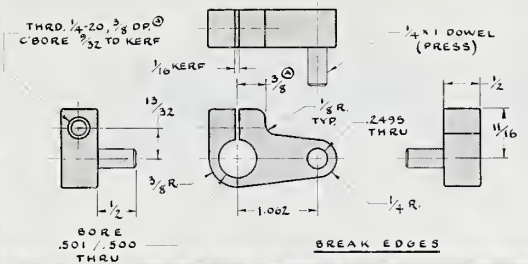
QTY. 2 PRTS.	FINISH	PAINT	MTL. ALMN. 6061-T651		DATE 1/92		
DAVIS design	5900 SO HWY 1094 PROSPECT, KY. 40059 502-425-5056	SCALE 100%	T. WHEEL BRACKET	DECIMALS +OR- .001 FRACTIONS +OR- 015		PLATE 46	



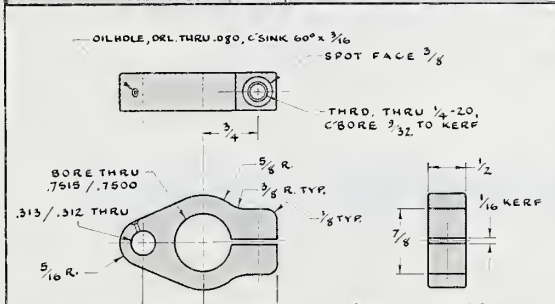
QTY. 1 PRT.	FINISH		MTL. C.R.S.		DATE 1/92		
DAVIS design	5900 SO HWY 1094 PROSPECT, KY. 40059 502-425-5056	SCALE 100%	T. PIVOT ARM	DECIMALS +OR- .001 FRACTIONS +OR- 015		PLATE 47	



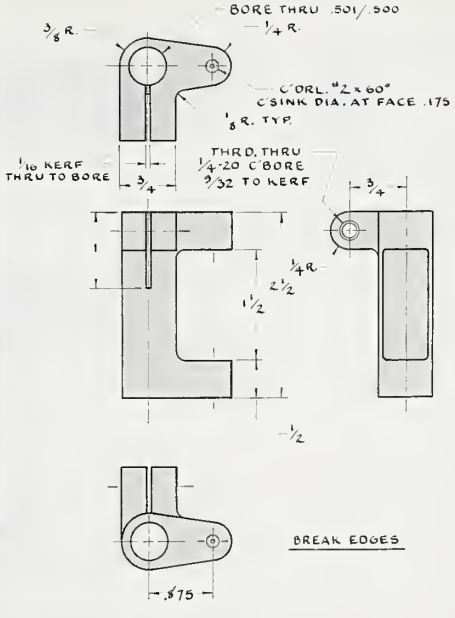
QTY. 3 PRTS.	FINISH		MTL. KNOB-ALMN. ~ C.R.S.		DATE 1/92		
DAVIS design	5900 SO HWY 1094 PROSPECT, KY. 40059 502-425-5056	SCALE 100%	T. LOCKSHAFT	DECIMALS +OR- .001 FRACTIONS +OR- 015		PLATE 48	



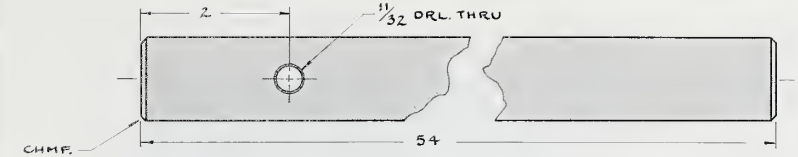
QTY.	1 PRT.	FINISH	PAINT	MTL.	C.R.S.	DATE	4/92
DAVIS design	5900 SO HWY 1094 PROSPECT, KY. 40059 502-425-5056	SCALE	100%	F. ROCKER PIVOT		PLATE	49
				DECIMALS +OR- .001 FRACTIONS +OR .015			



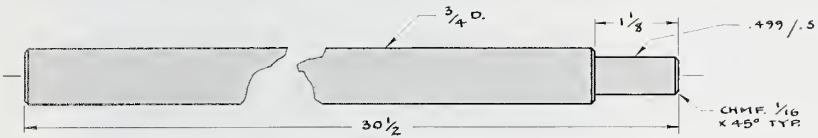
QTY.	2 PRTS.	FINISH		MTL.	C.R.S.	DATE	4/92
DAVIS design	5900 SO HWY 1094 PROSPECT, KY. 40059 502-425-5056	SCALE	100%	ECCENTRIC PIVOTS		PLATE	50
				DECIMALS +OR- .001 FRACTIONS +OR .015			



QTY.	1 PRT.	FINISH	PAINT	MTL.	C.R.S.	DATE	4/92
DAVIS design	5900 SO HWY 1094 PROSPECT, KY. 40059 502-425-5056	SCALE	100%	RR. ROCKER PIVOT		PLATE	51
				DECIMALS +OR- .001 FRACTIONS +OR .015			

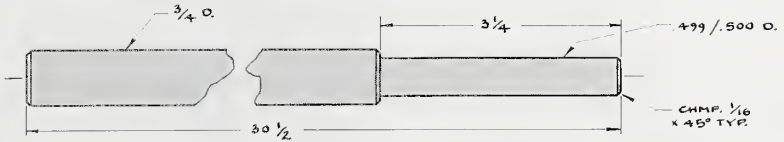


MAIN STAY SHAFT (5 PCS.)



FRONT ROCKER SHAFT (1 PC.)

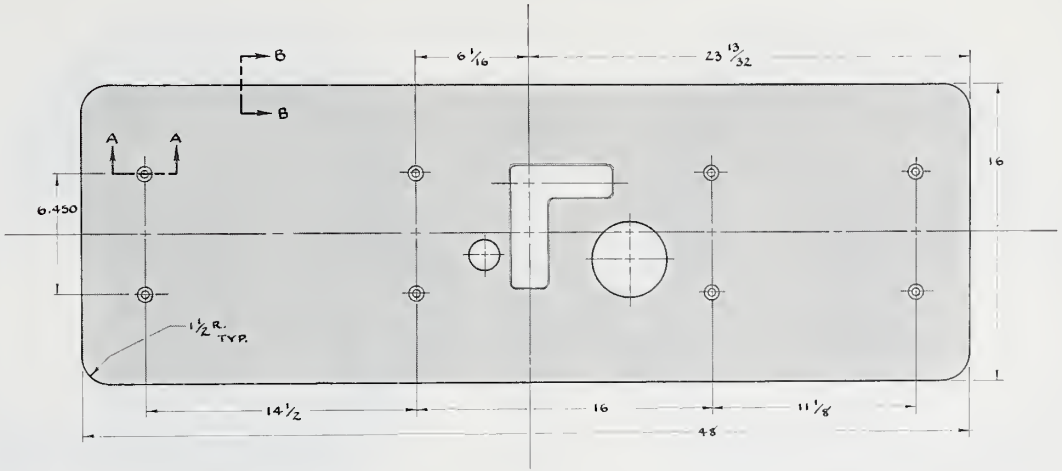
TYPICAL BEARING POINTS OF ROCKER SHAFT ENDS 2x SCALE

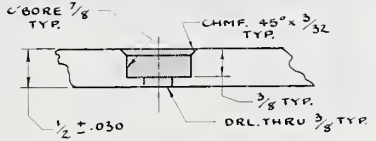


REAR ROCKER SHAFT (1 PC)

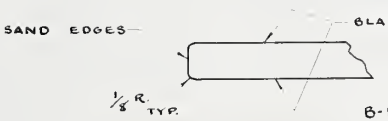
QTY. 7 PRTS.	FINISH	PLATE	MTL	STRESS PROOF	DATE	12/92
DAVIS design inc. 5900 3D HWY 1934 PROSPECT, KY. 40053 502-425-5058		SCALE 100%	STAY, ROCKER SHAFTS			PLATE 52
			DECIMALS ±.01 FRACTIONS ±.015			

9 3/4





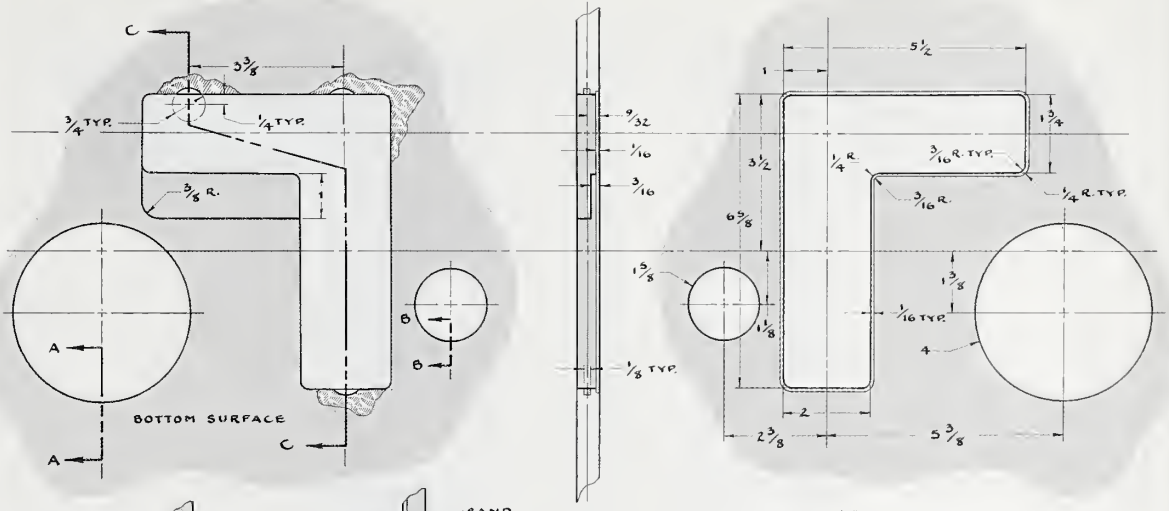
A-A
(FULL-SCALE)



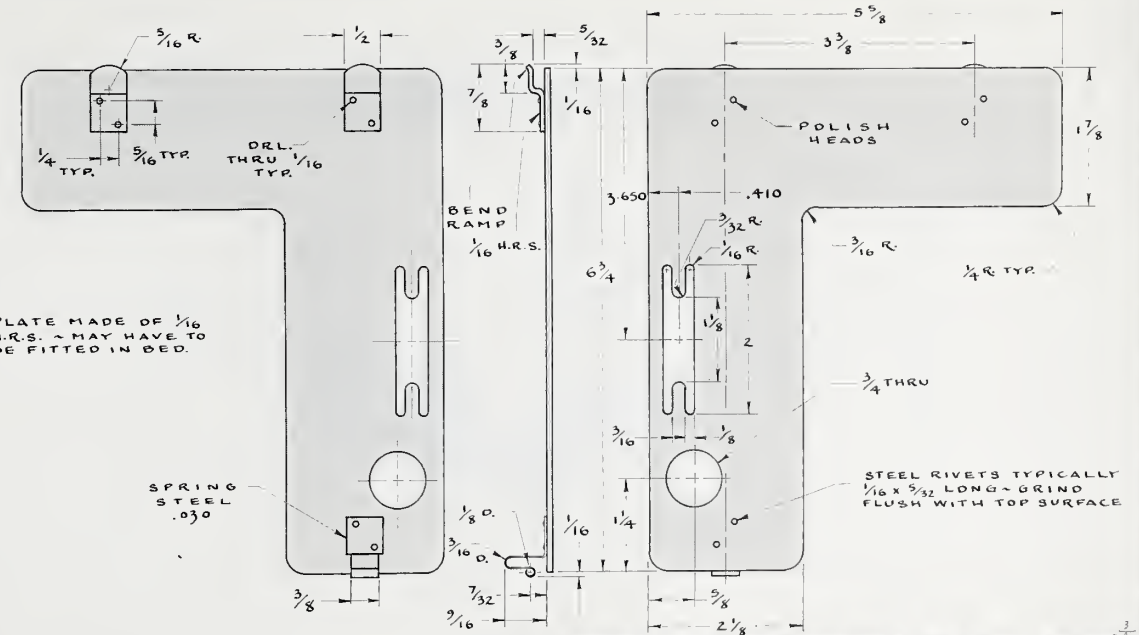
B-B
(FULL-SCALE)

3

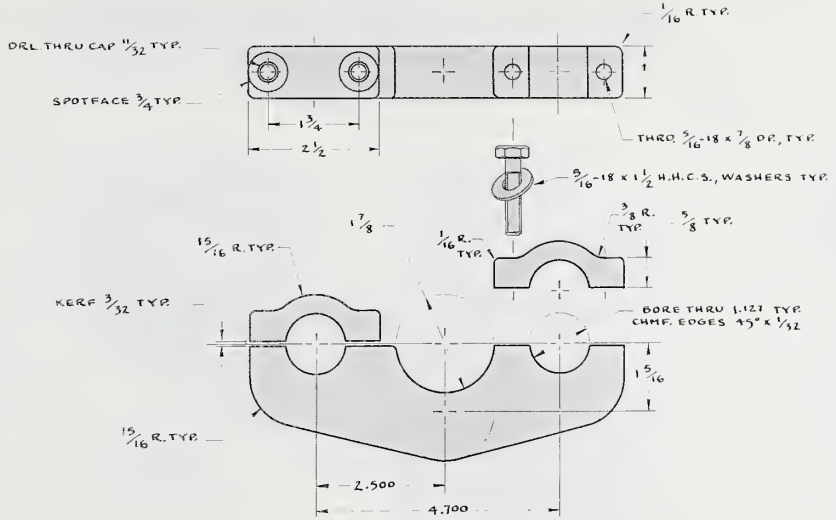
QTY. 1 PRT.	FINISH		MTL. H.R.S. NORMALIZE	DATE	1/92
DAVIS design	5900 S.HWY 1094 PROSPECT, KY. 40059 502-425-5056	SCALE 25%	BED		PLATE 53
			DECIMALS +OR-.001 FRACTIONS +OR-.015		



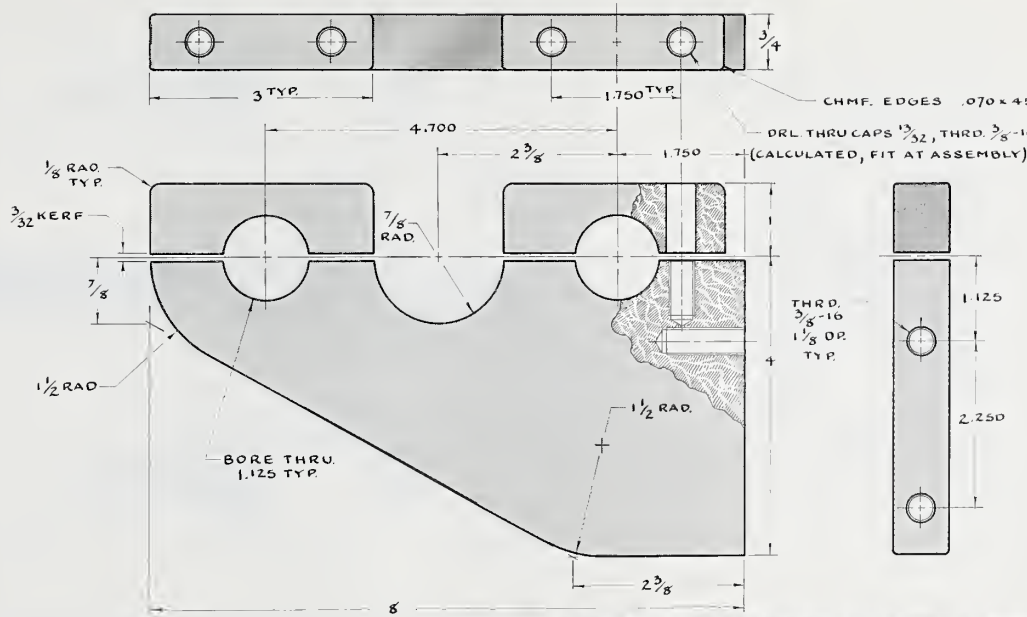
QTY.	FINISH		MTL.	DATE 1/92
DAVIS design	5900 SO. HWY 10 94 PROSPECT, KY 40059 502-425-5058	SCALE 60%	BED, DETAILS	PLATE 54
			DECIMALS ± .01 FRACTIONS ± 1/64	



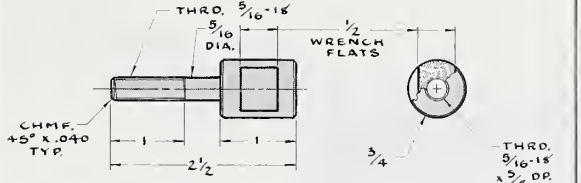
QTY.	1 PCS.	FINISH		MTL	H.R.S.	DATE	7-93
DAVIS design	5900 SO. HWY 109 PROSPECT, KY. 40059 502-425-5058		SCALE 100%	BED COVER PLATE			PLATE 55
				DECIMALS +OR- .001 FRACTIONS +OR- .015			



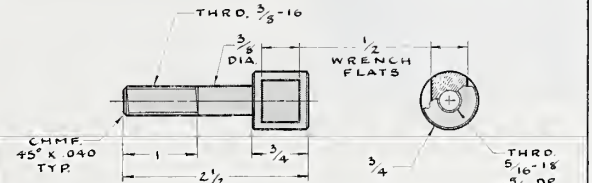
QTY. 2 ASMS.	FINISH	PAINT	MTL. 6061-T6		DATE	3-94
DAVIS design	5700 SO. HWY 1074 PROSPECT, KY. 40059 502-425-5058	SCALE 70%	BED SUPPORTS			PLATE 56
			DECIMALS +OR- .001 FRACTIONS +OR- .015			



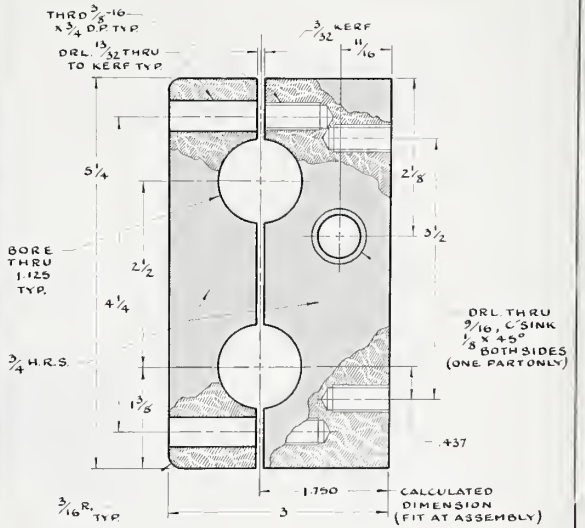
QTY.	2 ASMS.	FINISH	PAINT	MTL.	H.R.S.	DATE	2-92
DAVIS design	5300 30 HWY 1094 PROSPECT, KY. 40059 502-425-5058	SCALE	100%	LOWER CLAMP		PLATE	57
				DECIMALS ±.OR-.001 FRACTIONS ±.OR-.015			



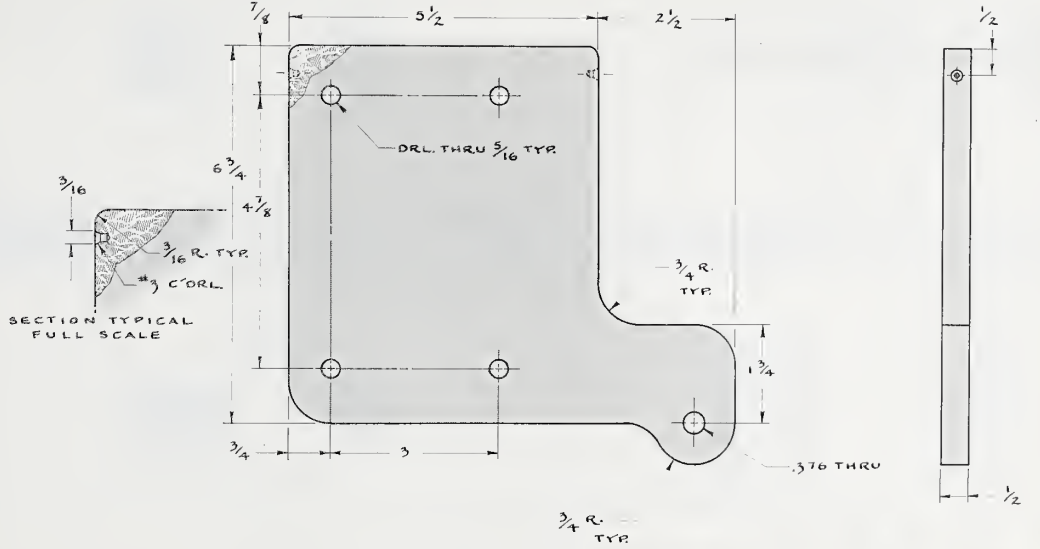
QTY. 4 PCS.	FINISH		MTL. STRESS PROOF	DATE 2-92
DAVIS design	5900 SO. HWY 1094 PROSPECT, KY. 40059 502-425-5055	SCALE 100%	BED SUPPORT STUD	PLATE 58
			DECIMALS +OR- .001 FRACTIONS +OR .015	



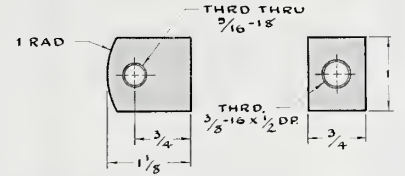
QTY. 4 PCS.	FINISH		MTL. STRESS PROOF	DATE 2-92
DAVIS design	5900 SO. HWY 1094 PROSPECT, KY. 40059 502-425-5055	SCALE 100%	LOWER CLAMP STUD	PLATE 59
			DECIMALS +OR- .001 FRACTIONS +OR .015	



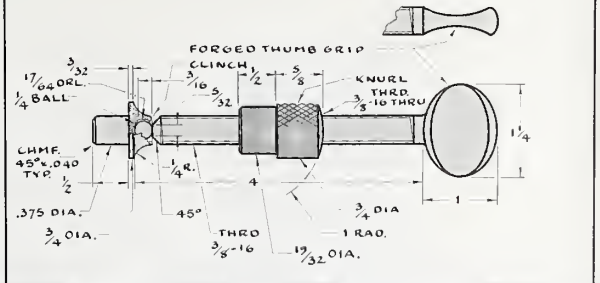
QTY. 2 ASMS.	FINISH	PAINT	MTL. H.R.S.	DATE 2-92
DAVIS design	5900 SO. HWY 1094 PROSPECT, KY. 40059 502-425-5055	SCALE 100%	TOP CLAMP	PLATE 60
			DECIMALS +OR- .001 FRACTIONS +OR .015	



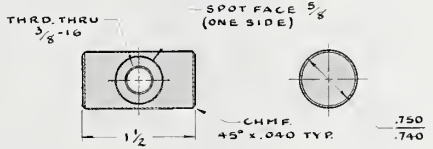
QTY.	1 PCS.	FINISH	PAINT	MTL.	ALUMN. #6061	DATE	7-93
DAVIS design	5900 30 HWY 109+ PROSPECT, KY. 40059 502-425-5058		SCALE	75%	MOTOR MOUNT		PLATE 61
			DECIMALS +OR- .001 FRACTIONS +OR- 015				



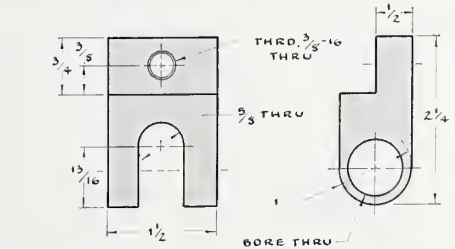
QTY.	2 PRTS.	FINISH	PAINT	MTL.	C.R.S.	DATE	1-92
DAVIS design	5900 SO.HWY 1694 PROSPECT,KY. 40059 502-425-5055	SCALE	100%	PIVOT	DECIMALS +OR-.001 FRACTIONS +OR-.015	PLATE	62



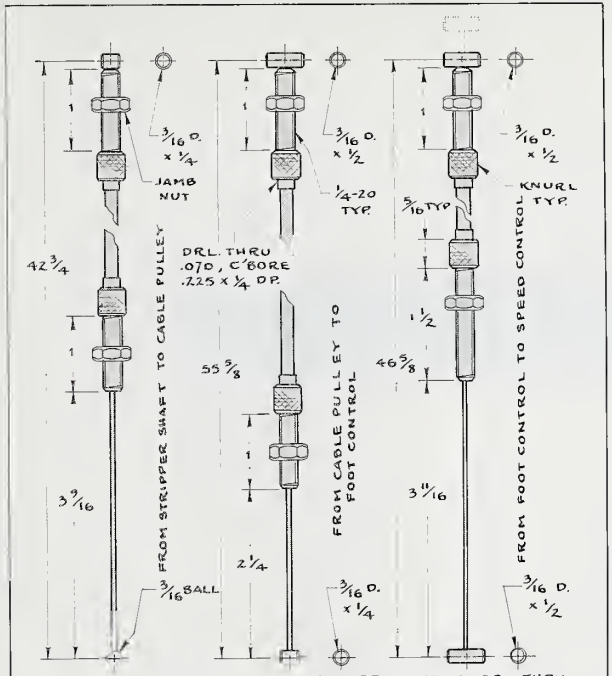
QTY.	1 ASM.	FINISH	PLATE	MTL.	STRESS PROOF	DATE	1-92
DAVIS design	5900 SO.HWY 1694 PROSPECT,KY. 40059 502-425-5055	SCALE	100%	SCREW	DECIMALS +OR-.001 FRACTIONS +OR-.015	PLATE	64



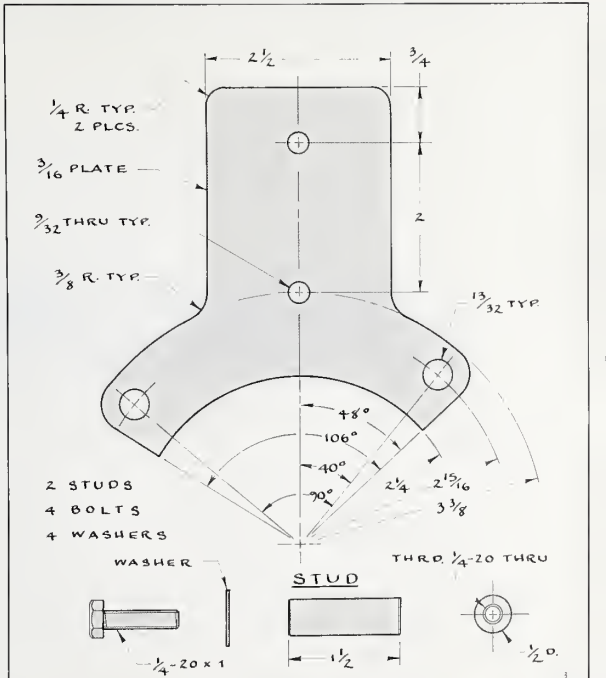
QTY.	1 PRT.	FINISH	PLATE	MTL.	STRESS PROOF	DATE	1-92
DAVIS design	5900 SO.HWY 1694 PROSPECT,KY. 40059 502-425-5055	SCALE	100%	SWIVEL	DECIMALS +OR-.001 FRACTIONS +OR-.015	PLATE	63



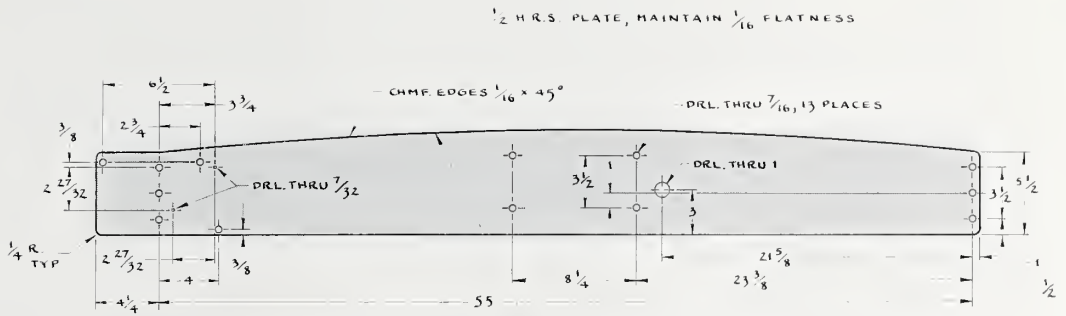
QTY	1 PRT.	FINISH	PLATE	MTL.	C.R.S.	DATE	1-92
DAVIS design	5900 SO.HWY 1694 PROSPECT,KY. 40059 502-425-5055	SCALE	100%	BRACKET	DECIMALS +OR-.001 FRACTIONS +OR-.015	PLATE	65



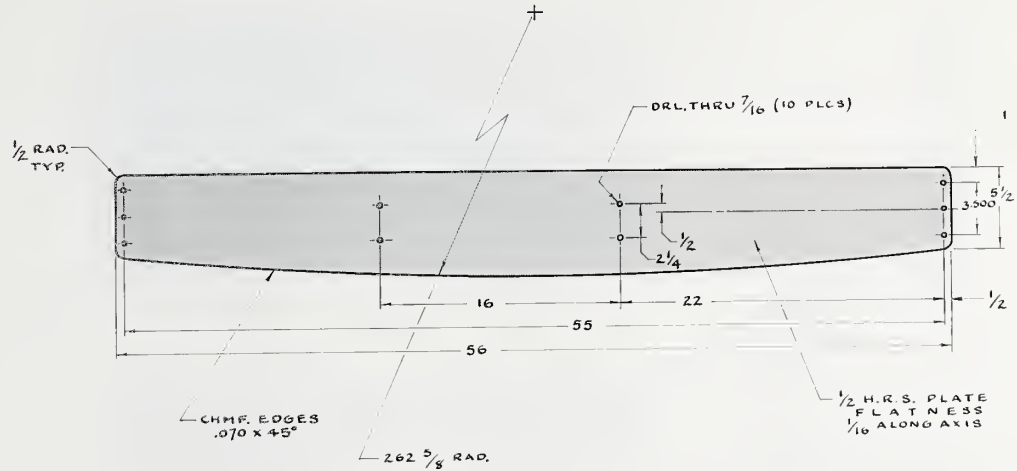
QTY.	3 ASM. 18 PRTS.	FINISH		MTL.	STEEL	DATE	7-93
DAVIS design	5900 SO. HWY 1094 PROSPECT, KY. 40059 502-425-5058	SCALE	100%	CONTROL CABLES			PLATE 66
		DECIMALS ± .OR ± .001 FRACTIONS ± OR ± .015					



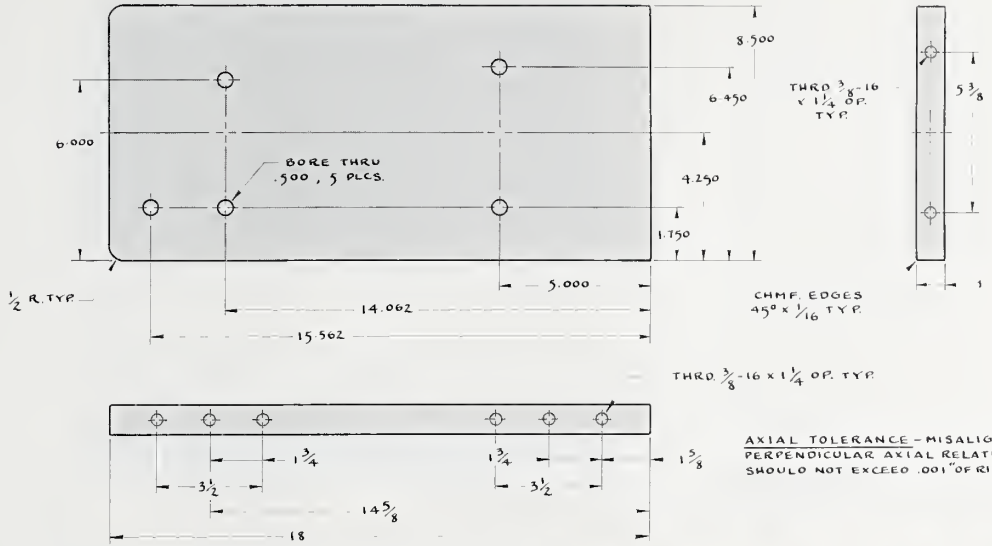
QTY.	1 ASM. 11 PCS.	FINISH	PAINT	MTL.	ALUMN. 6061	DATE	7-93
DAVIS design	5900 SO. HWY 1094 PROSPECT, KY. 40059 502-425-5058	SCALE	100%	GAURD BRACKET			PLATE 67
		DECIMALS ± .OR ± .001 FRACTIONS ± OR ± .015					



QTY.	1 PRT.	FINISH	PAINT	MTL.	H.R.S.	DATE	3-94
DAVIS design	5900 3D HWY 1064 PROSPECT, KY 40059 502-425-5056	SCALE	20%	TOP ARCH			PLATE 68
		DECIMALS ±.OR±.001 FRACTIONS ±OR.015					

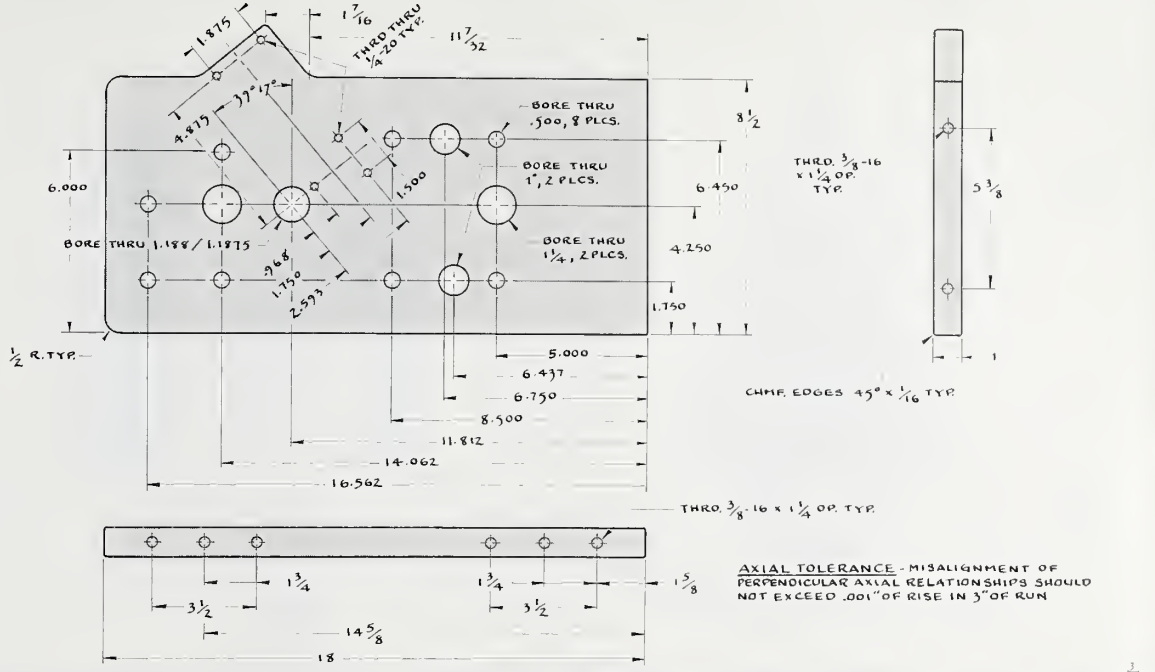


QTY.	1 PRT.	FINISH	PAINT	MTL.	H.R.S	DATE	1-92
DAVIS design	5900 SO. HWY 1094 PROSPECT, KY. 40059 502-425-5058		SCALE	20%	BOTTOM ARCH		PLATE 69
				DECIMALS ±0R-.001 FRACTIONS ±0R-.015			



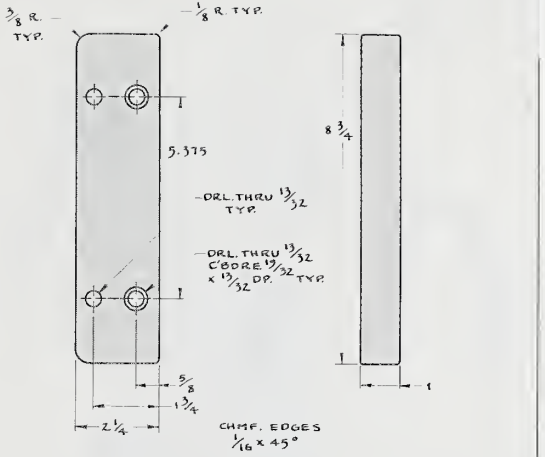
AXIAL TOLERANCE – MISALIGNMENT OF PERPENDICULAR AXIAL RELATIONSHIPS SHOULD NOT EXCEED .001" OF RISE IN 3" OF RUN

QTY 1 PRT.	FINISH	PAINT	MTL. 6061-T6		DATE	1-92
DAVIS design	5900 SO HWY 104 PROSPECT, KY. 40059 502-425-5056	SCALE 40%	LEFT END PLATE			PLATE 70
			DECIMALS ±.OR-.001 FRACTIONS ±OR .015			

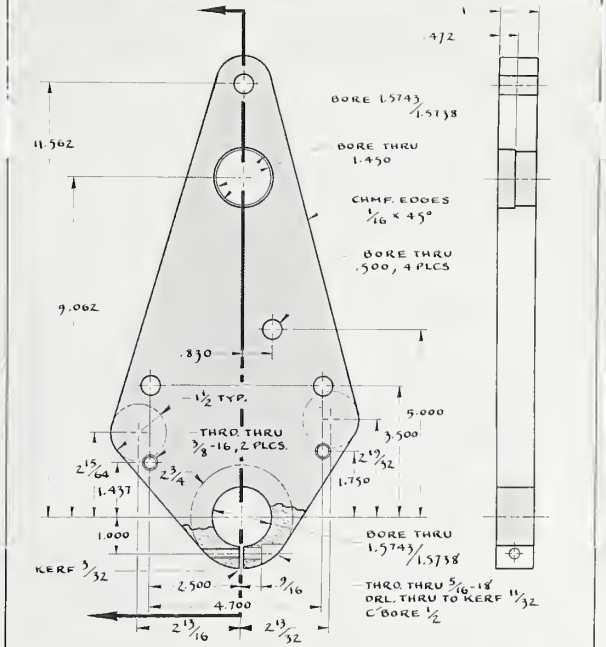


AXIAL TOLERANCE - MISALIGNMENT OF PERPENDICULAR AXIAL RELATIONSHIPS SHOULD NOT EXCEED .001" OF RISE IN 3" OF RUN

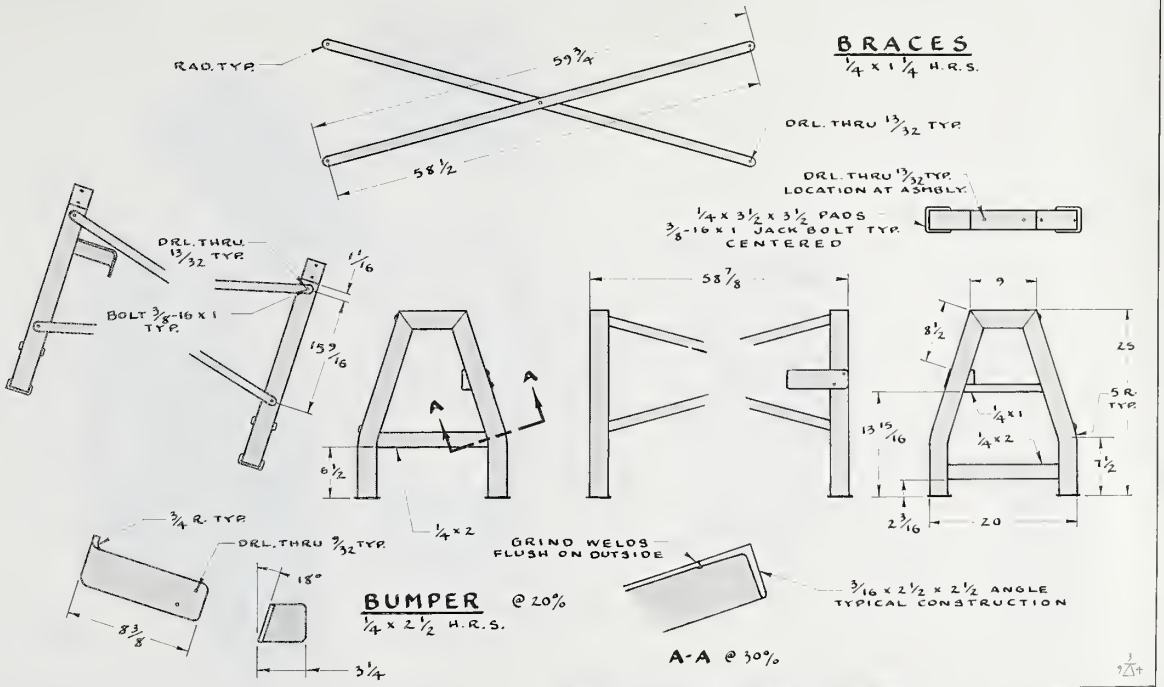
QTY	1 PRT.	FINISH	PAINT	MTL.	6061-T6	DATE	1-92
DAVIS design	5900 SO. HWY 1094 PROSPECT, KY. 40059 502-429-5055		SCALE	RIGHT END PLATE			PLATE
			40%	DECIMALS ±.OR-.001 FRACTIONS ±.OR-.015			71



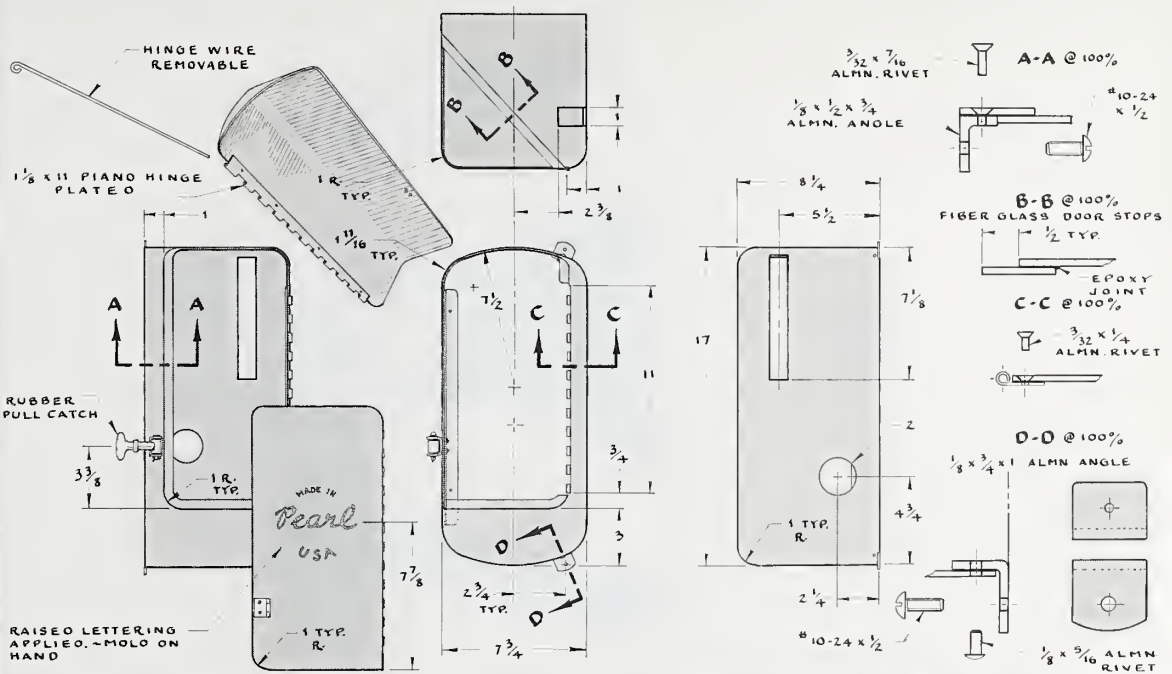
QTY.	2 PRTS	FINISH	PAINT	MTL.	6061-T6	DATE	2-92
DAVIS design	5900 SO. HWY 1094 PROSPECT, KY. 40059 502-425-5055	SCALE	50%	FEET			PLATE 72
		DECIMALS ± OR ± .001 FRACTIONS ± OR .015					



QTY.	1 PRT.	FINISH	PAINT	MTL.	6061-T6	DATE	2-92
DAVIS design	5900 SO. HWY 1094 PROSPECT, KY. 40059 502-425-5055	SCALE	50%	END CAP			PLATE 73
		DECIMALS ± OR ± .001 FRACTIONS ± OR .015					

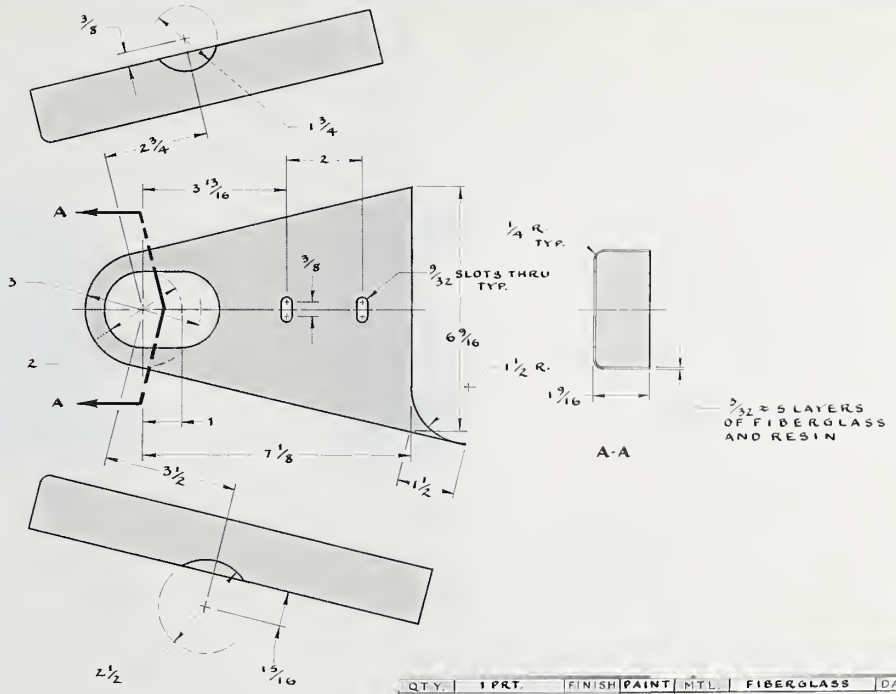


QTY. 1 ASM. 3 PRTS.	FINISH	PAINT	MTL	H. R. S.	DATE	8-93
DAVIS design 5900 SO. HWY 1094 PROSPECT, KY. 40059 502-425-5056		SCALE 10%	STAND			PLATE 74
			DECIMALS ±.01 FRACTIONS ±1/16			

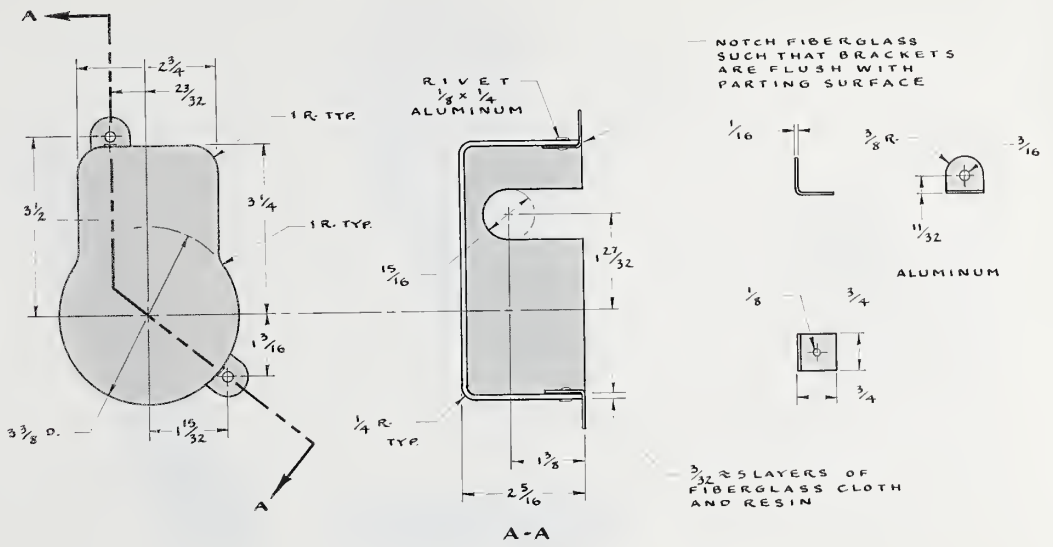


COVER (GUARD) MADE OF 5 LAYERS OF FIBERGLASS CLOTH AND RESIN. LAY UP SHELL, CUT DOOR AND OPENINGS. EPOXY DOOR STOPS AND RIVET HARDWARE.

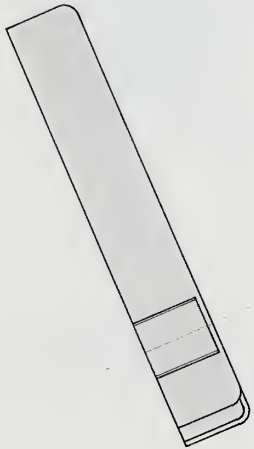
QTY.	1 ASSY.	FINISH	PAINT	MTL.	FIBERGLASS	DATE	8-93
DAVIS design	5000 SO. HWY 1094 PROSPECT, KY 40059 502-228-5056	SCALE	25%	REAR COVER GUARD			PLATE 75
				DECIMALS ± .01 FRACTIONS ± 1/16			

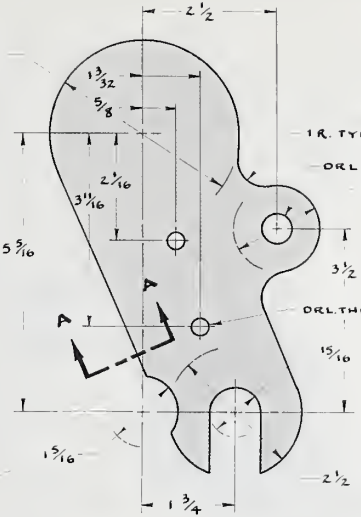


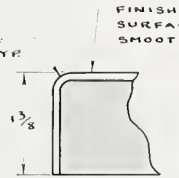
QTY.	1 PRT.	FINISH	PAINT	MTL.	FIBERGLASS	DATE	5-93
DAVIS design	5300 SO. HWY 1934 PROSPECT, KY. 40059 502-425-5055	SCALE	50%	MOTOR BELT GUARD		PLATE	76
		DECIMALS ÷OR- .001 FRACTIONS ÷OR- 1/16					



QTY. 1 PRT. 3 PCS.	FINISH	PAINT	MTL. FIBERGLASS	DATE	8-93
DAVIS design	5000 30 HWY 1094 PROSPECT, KY. 40059 502-425-5058	SCALE 70%	TRANSPORT GUARD	PLATE	77
			DECIMALS ±.OR±.001 FRACTIONS ±OR±.015		

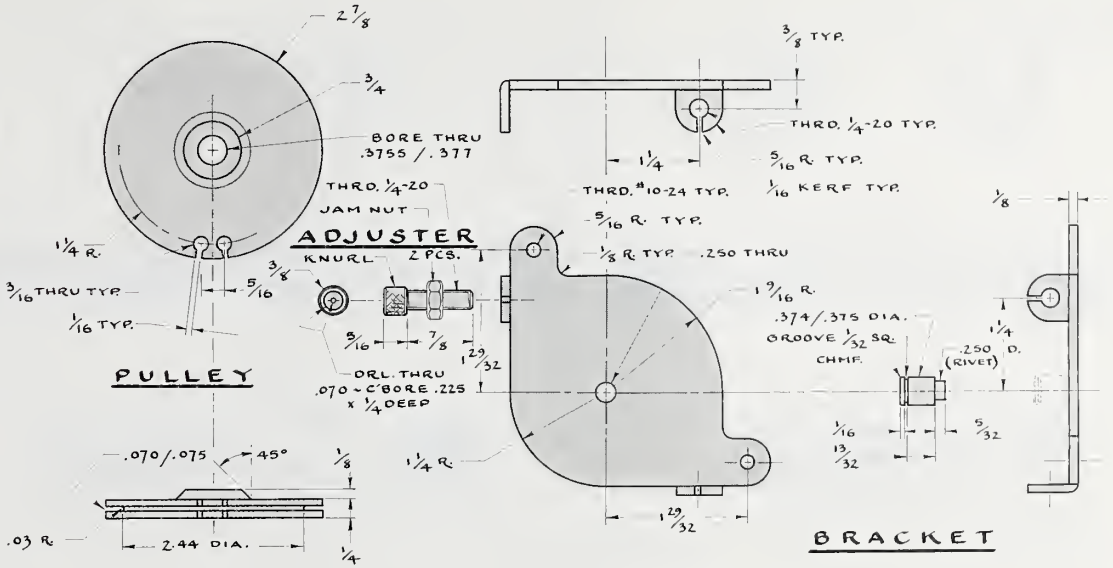




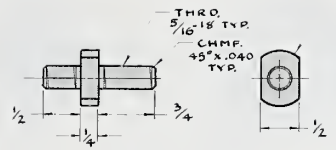


A-A @ 100%

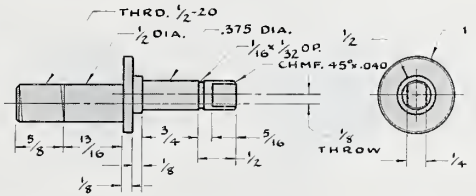
QTY 1 PRT.	FINISH	PAINT	MTL. FIBERGLASS			DATE	8-93
DAVIS design 5900 3D HWY 1694 PROSPECT, KY 40059 502-425-5055		SCALE 70%	HANDWHEEL GAURD DECIMALS +OR- .001 FRACTIONS +OR- .015			PLATE	78



QTY.	1 ASM. ~ 7 PCS.	FINISH	PAINT	MTL.	C.R.S.	DATE	7-93
DAVIS design	5900 SO. HWY 1694 PROSPECT, KY. 40059 502-425-5056	SCALE	100%	CABLE PULLEY ASM.			PLATE 79
				DECIMALS +OR- .001 FRACTIONS +OR- .015			

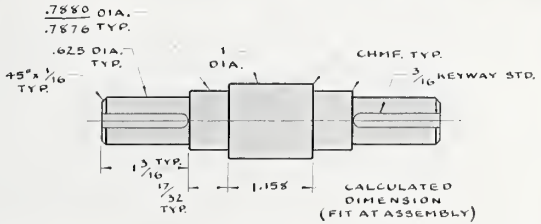


QTY.	8 PCS.	FINISH		MTL.	STRESS PROOF	DATE	12-92
DAVIS design	5900 SO.HWY 1094 PROSPECT, KY. 40059 502-425-5058	SCALE	100%	BEDJACK SCREW			PLATE 80
				DECIMALS ±0R-.001 FRACTIONS ±0R-.015			

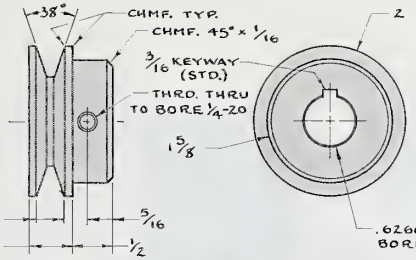


QTY.	1 PCS.	FINISH		MTL.	STRESS PROOF	DATE	12-92
DAVIS design	5900 SO.HWY 1094 PROSPECT, KY. 40059 502-425-5058	SCALE	100%	HANDWHEEL IDLER			PLATE 81
				DECIMALS ±0R-.001 FRACTIONS ±0R-.015			

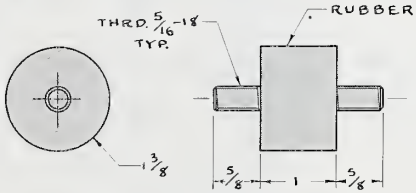
QTY.	1 PCS.	FINISH		MTL.	ALUM.~6061	DATE	12-92
DAVIS design	5900 SO.HWY 1094 PROSPECT, KY. 40059 502-425-5058	SCALE	100%	HANDWHEEL ROLL			PLATE 82
				DECIMALS ±0R-.001 FRACTIONS ±0R-.015			



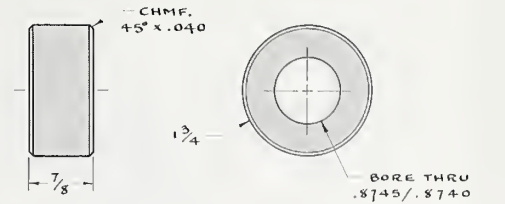
QTY.	1 PCS.	FINISH		MTL.	STRESS PROOF	DATE	12-92
DAVIS design	5900 SO.HWY 1094 PROSPECT, KY. 40059 502-425-5058	SCALE	100%	HANDWHEEL SHAFT			PLATE 83
				DECIMALS ±0R-.001 FRACTIONS ±0R-.015			



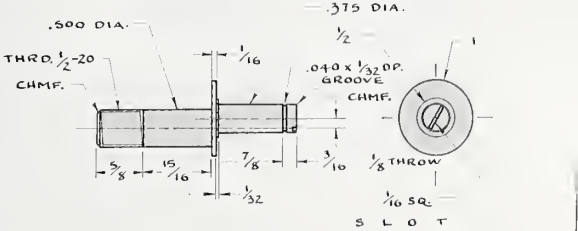
QTY.	1 PCS.	FINISH		MTL.	ALUMN. 6061	DATE	7-93
DAVIS design	5900 SO. HWY 1094 PROSPECT, KY. 40059 502-425-5056	SCALE	100%	MOTOR PULLEY	DECIMALS ±.OR-.001 FRACTIONS ±.OR-.015	PLATE	84



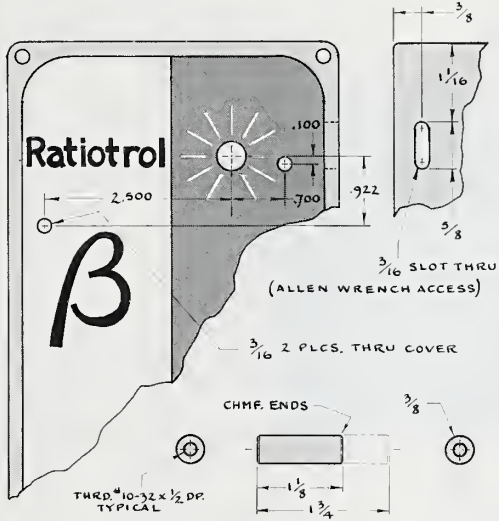
QTY.	4 PCS.	FINISH		MTL.	STOCK ITEM	DATE	7-93
DAVIS design	5900 SO. HWY 1094 PROSPECT, KY. 40059 502-425-5056	SCALE	100%	MOTOR MOUNTS	DECIMALS ±.OR-.001 FRACTIONS ±.OR-.015	PLATE	85



QTY.	1 PCS.	FINISH		MTL.	ALUMN. 6061	DATE	7-93
DAVIS design	5900 SO. HWY 1094 PROSPECT, KY. 40059 502-425-5056	SCALE	100%	REAR IDLER ROLL	DECIMALS ±.OR-.001 FRACTIONS ±.OR-.015	PLATE	86



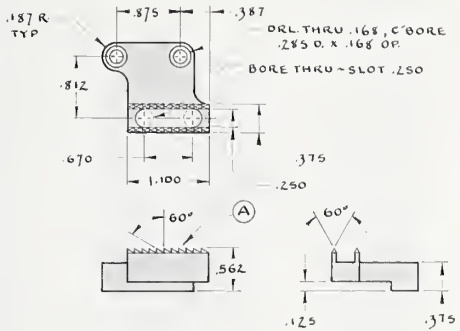
QTY.	1 PCS.	FINISH		MTL.	STRESS PROOF	DATE	7-93
DAVIS design	5900 SO. HWY 1094 PROSPECT, KY. 40059 502-425-5056	SCALE	100%	REAR IDLER	DECIMALS ±.OR-.001 FRACTIONS ±.OR-.015	PLATE	87



SPACERS

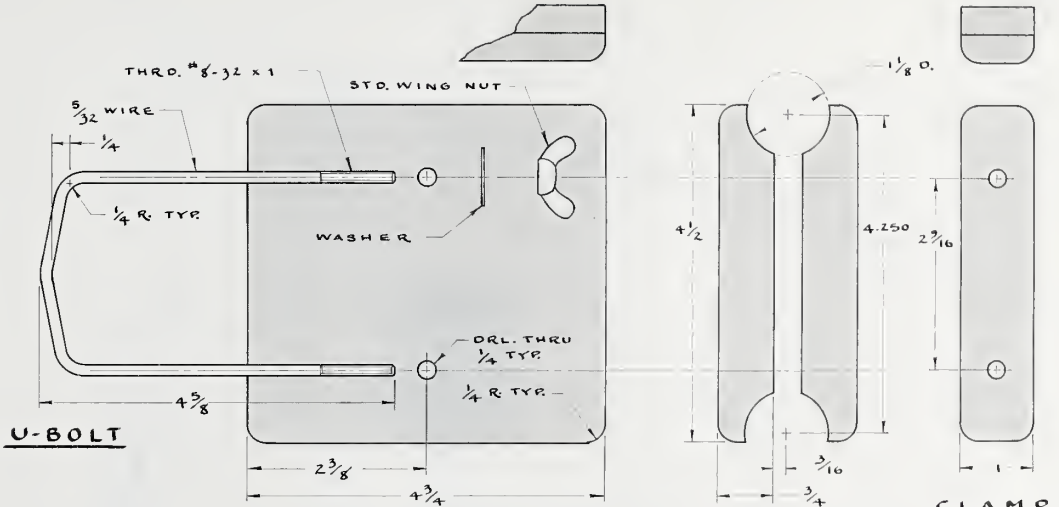
STRESS PROOF - 1 EA. LENGTHS

QTY.	1 PRT.	FINISH		MTL.	STOCK ITEM	DATE	12-93
DAVIS design	5900 SO. HWY 1094 PROSPECT, KY. 40059 502-425-5056	SCALE	100%	CONTROL COVER MODE			PLATE 88
				DECIMALS ±.OR-.001 FRACTIONS ±OR-.015			

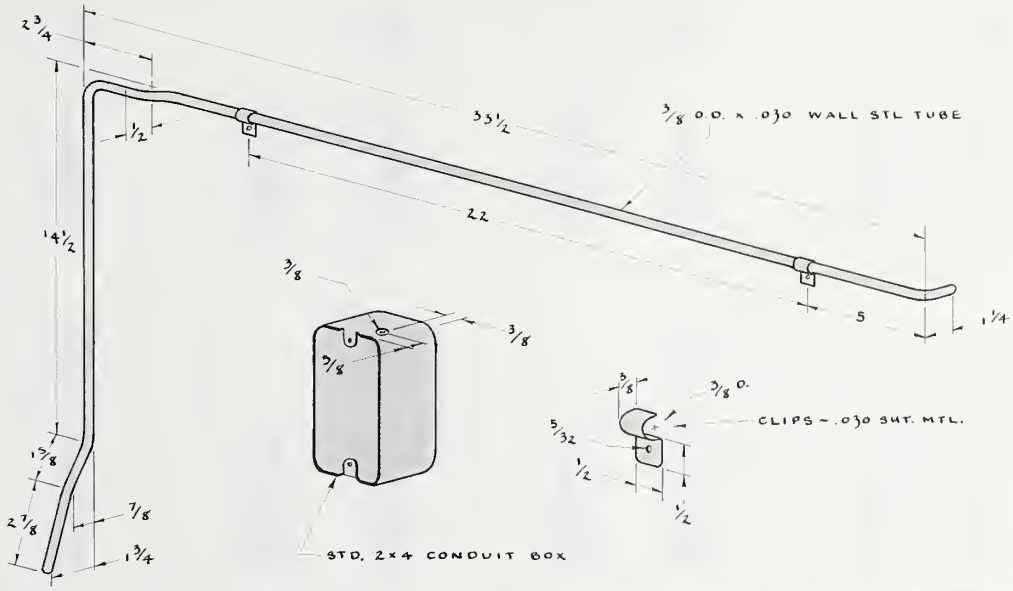


(A) 11 POINTS SPACED AT .100
GRIND TO A SHARP POINT

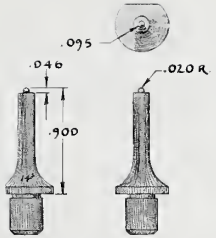
QTY.	1 PRT.	FINISH		MTL.	CARBIDE	DATE	12-93
DAVIS design	5900 SO. HWY 1094 PROSPECT, KY. 40059 502-425-5056	SCALE	100%	PLATE GRIPPER			PLATE 89
				DECIMALS ±.OR-.001 FRACTIONS ±OR-.015			



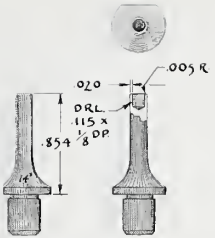
QTY 1 ASM. 7 PCS.	FINISH PAINT	MTL. WOOD ~ STEEL	DATE 7-93
DAVIS 5900 30 HWY 10 W PROSPECT, NY. 13439 502-425-5056	SCALE 100%	LAMP MOUNT ASM.	PLATE 90
		DECIMALS ±.01 FRACTIONS ±.015	



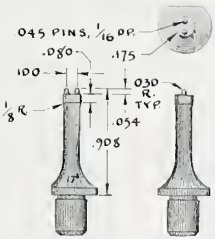
QTY. 1 ASM. 4 PCS.	FINISH	PAINT	MTL.		DATE	7-93
DAVIS design 5700 S.D. HWY 1694 PROSPECT, KY. 40059 502-425-5056		SCALE	35%	CONDUIT ASM.		PLATE 91
			DECIMALS +OR- .001 FRACTIONS +OR .015			



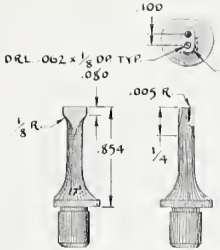
14^3 MALE



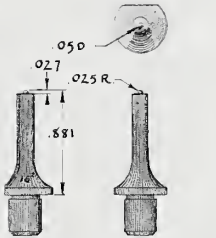
14^3 FEMALE



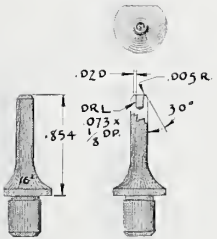
17^2 MALE



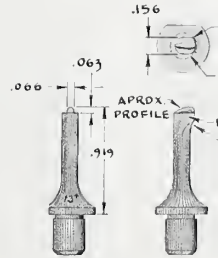
17^2 FEMALE



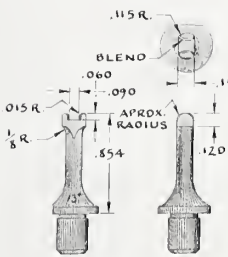
16^2 MALE



16^2 FEMALE

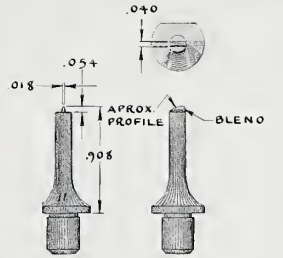


13^4 MALE

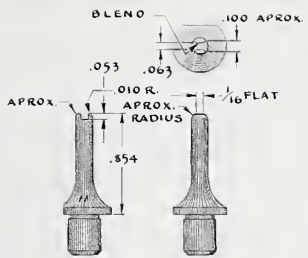


13^4 FEMALE

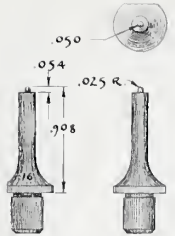
QTY.	1 SET EACH	FINISH		MTL.	STRESS PROOF	DATE	3-94
DAVIS design	5900 SO. HWY 1094 PROSPECT, KY. 40059 502-425-5058		SCALE ≈ 140%	PUNCHES			PLATE 92
				DECIMALS - OR - 001 FRACTIONS - OR .015			



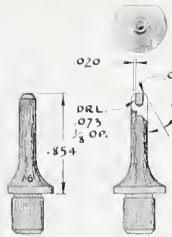
11 MALE



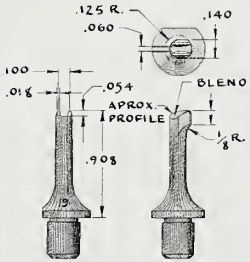
11 FEMALE



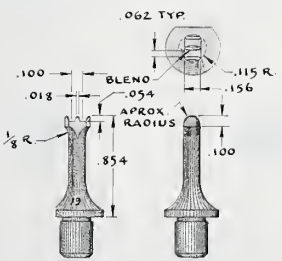
16 MALE



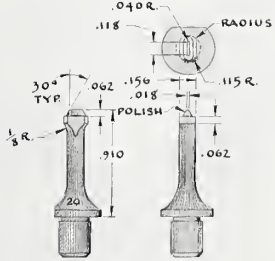
16 FEMALE



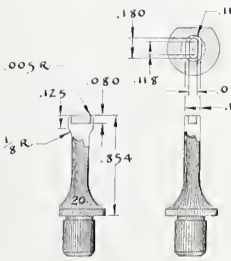
19 MALE



19 FEMALE

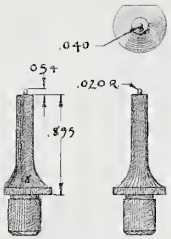


20 MALE

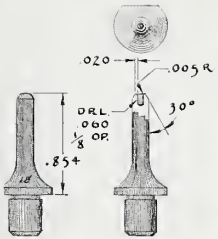


20 FEMALE

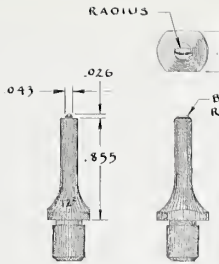
QTY 1 SET EACH	FINISH		MTL STRESS PROOF	DATE 5-94
DAVIS design	5900 SOUTHWYNDO PROSPECT, KY. 40059 502-425-5056	SCALE 140%	PUNCHES	PLATE 93
			DECIMALS ±.OR-.001 FRACTIONS ±.OR .015	



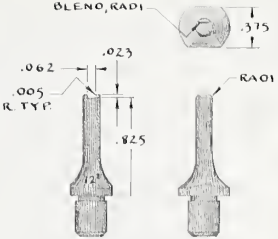
18 MALE



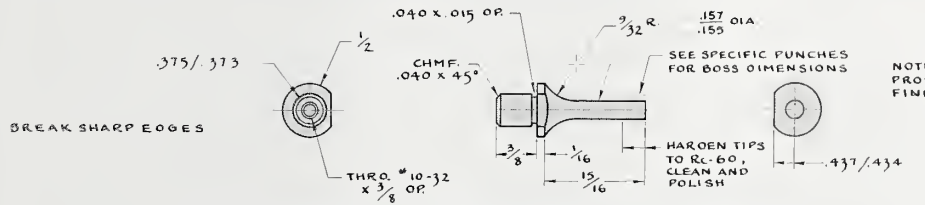
18 FEMALE



12° MALE



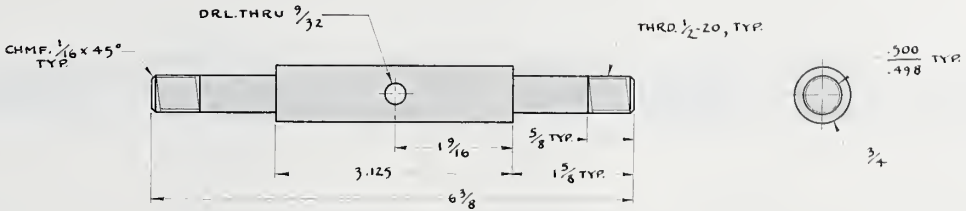
12° FEMALE



PUNCH BLANKS - GENERAL SPECIFICATIONS

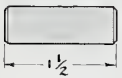
STRESS PROOF - FLAME HARDEN

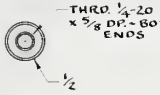
QTY. 1 SET EACH	FINISH		MTL.	STRESS PROOF	DATE	2-94
DAVIS design	5900 SOUTHWIND PROSPECT, KY 40059 502-425-5056	SCALE ≈ 140%	PUNCHES			PLATE 94
			DECIMALS ±.OR-.001 FRACTIONS ±OR .015			



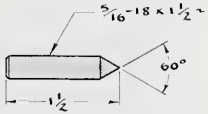
9 3/4

QTY.	5 PRTS	FINISH	PLATE	MTL.	STRESS PROOF	DATE	3-94
DAVIS design	5900 SOUTH HWY 180 PROSPECT, KY. 40059 502-425-5058	SCALE	100%	END PLATE STUDS			PLATE 95
				DECIMALS +OR-.001 FRACTIONS +OR-.015			

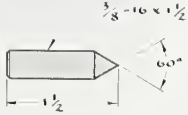




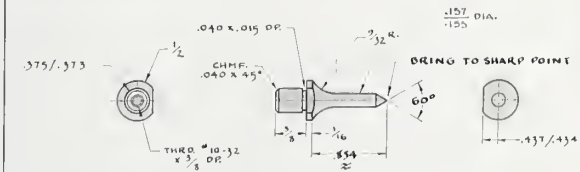
QTY. 2 PCS.	FINISH		MTL. C.R.S.	DATE 8-94
DAVIS design 5900 SO.HWY 1084 PROSPECT,KY. 40059 502-425-5058	SCALE 100%	SPACER STUDS		PLATE 96
		DECIMALS +OR-.001 FRACTIONS +OR-.015		



QTY. 4 PCS.	FINISH		MTL.	DATE 8-94
DAVIS design 5900 SO.HWY 1084 PROSPECT,KY. 40059 502-425-5058	SCALE 100%	PIVOT SCREW		PLATE 97
		DECIMALS +OR-.001 FRACTIONS +OR-.015		



QTY. 2 PCS.	FINISH		MTL.	DATE 8-94
DAVIS design 5900 SO.HWY 1084 PROSPECT,KY. 40059 502-425-5058	SCALE 100%	PIVOT SCREW		PLATE 98
		DECIMALS +OR-.001 FRACTIONS +OR-.015		



QTY. 2 PCS.	FINISH		MTL. STRESS PROOF	DATE 8-94
DAVIS design 5900 SO.HWY 1084 PROSPECT,KY. 40059 502-425-5058	SCALE 100%	ALIGNMENT PUNCHES		PLATE 99
		DECIMALS +OR-.001 FRACTIONS +OR-.015		

ASSEMBLY DRAWINGS

DESCRIPTION	PLATE
UPPER SPINDLE AND CRANK BLOCK ASSEMBLY	101
LOWER SPINDLE AND CRANK BLOCK ASSEMBLY	102
LOWER GEARBOX AND DRIVE SHAFT ASSEMBLY	103
UPPER DRIVESHAFT AND HANDWHEEL ASSEMBLY	104
VARIABLE ECCENTRIC ASSEMBLY	105
TRANSPORT WHEEL ASSEMBLY	106
TRANSPORT ASSEMBLY-FEED	107
SPEED CONTROL ASSEMBLY	108
FOOT CONTROL ASSEMBLY	109
MOTOR MOUNTING AND CONDUIT ASSEMBLY	110
GENERAL FRAME ASSEMBLY	111
MACHINE STAND	112

DAVIS design
P.O. BOX 342
CRESTWOOD, KY.
40014
502-425-5038

ASSEMBLY DRAWINGS-CONTENTS

DATE 9-94

PLATE 100

ITEM NO.	PLATE REF. NO.	QTY. REQ.	Pearl DESCRIPTION
1	36	1	TENSION ADJUSTER
2	36	1	SPRING
3	36	1	WASHER
4	36	1	STRIPPER SHAFT
5	25	1	DRAWBAR
6	25	1	TOP SPINDLE
7	30	1	SCREW
8	8	2	BOLTS
9	8	2	WASHERS
10	8	1	UPPER SPINOLE BLOCK
11	8	1	BUSHING
12	8	2	OIL CUPS
13	34	1	STRIPPER GUIDE
14	34	2	SCREWS
15	30	1	CABLE PULL
16	8	1	BUSHING
17	35	1	FOOT SCREW
18	35	1	FOOT SUPPORT
19	35	1	PIN
20	35	1	FOOT
21	8	1	BUSHING
22	92	1	PUNCH
23	33	1	SPINDLE JOURNAL
24	33	2	SCREWS
25	33	1	WASHER
26	32	1	CONNECTING ROD
27	32	1	CON ROD CAP
28	32	2	CON. ROD SCREWS
29	29	1	WASHER
30	33	1	WASHER
31	30	1	SLIDE BEARING
32	33	1	SCREW
33	29	1	SPINDLE JOURNAL
34	23	1	NUT - 3/8-24
35	38	1	WASHER - 3/8
36	31	1	CRANK
37	29	1	WASHER - 1/4
38	29	1	NUT - 1/4-28
39	28	2	SLIDE BLOCKS
40	11	2	BOLTS
41	11	2	WASHERS
42	11	1	UPPER CRANK BLOCK
43	11	1	BEARING - "104-KSZZ
44	11	4	SCREWS - "6-32 x 3/4
45	11	4	GIB NUTS
46	11	4	GIB SCREWS

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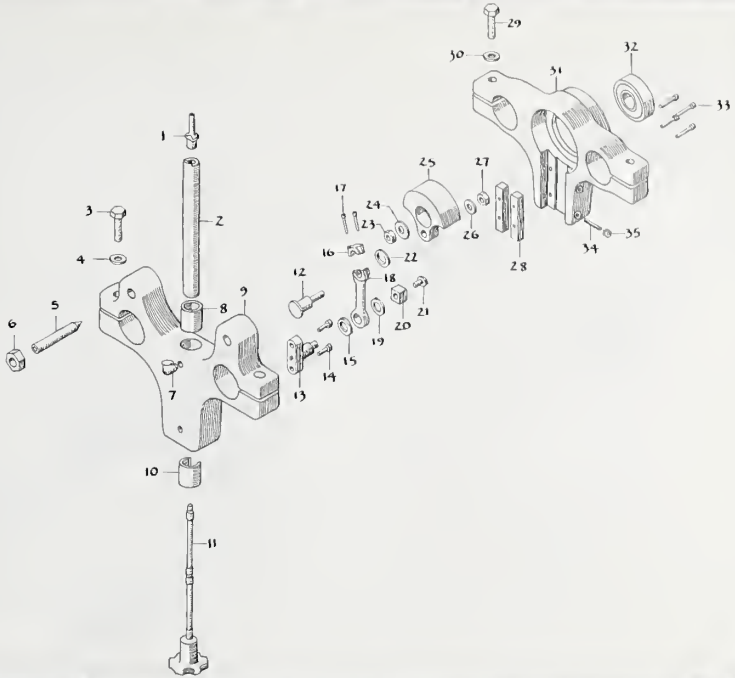
UPPER SPINDLE AND CRANK BLOCK ASSEMBLY

DATE 7-94

PLATE 101

ITEM NO.	PLATE REF. NO.	QTY. REQ.	Pearl DESCRIPTION
1	9Z	1	PUNCH - MALE
2	20	1	BOTTOM SPINDLE
3	9	2	BOLTS
4	9	2	WASHERS
5	9B	2	PIVOT SCREWS
6	9B	2	NUTS - 5/8-18, JAM
7	9	2	OIL CUPS
8	9	1	BUSHING
9	9	1	LOWER SPINDLE BLOCK
10	9	1	BUSHING - MODIFY
11	20	1	BOTTOM DRAWBAR
12	29	1	CRANK JOURNAL
13	33	1	SPINDLE JOURNAL
14	20	2	JOURNAL BOLTS
15	33	1	WASHER
16	32	1	CON. ROD CAP
17	32	2	CON. ROD SCREWS
18	32	1	CONNECTING ROD
19	33	1	WASHER
20	30	1	SLIDE BEARING
21	33	1	SCREW
22	29	1	WASHER
23	38	1	NUT - 3/8-24
24	38	1	WASHER, FLAT - 3/8
25	31	1	CRANK
26	29	1	WASHER, FLAT - 1/4
27	29	1	NUT - 1/4-28
28	28	2	SLIDE BLOCKS
29	12	2	BOLTS
30	12	2	WASHERS
31	12	1	LOWER CRANK BLOCK
32	12	1	BEARING - #104-K522
33	12	4	S.H.C.S. - #6-32 x 3/4
34	12	4	GIB SCREWS
35	12	4	GIB NUTS



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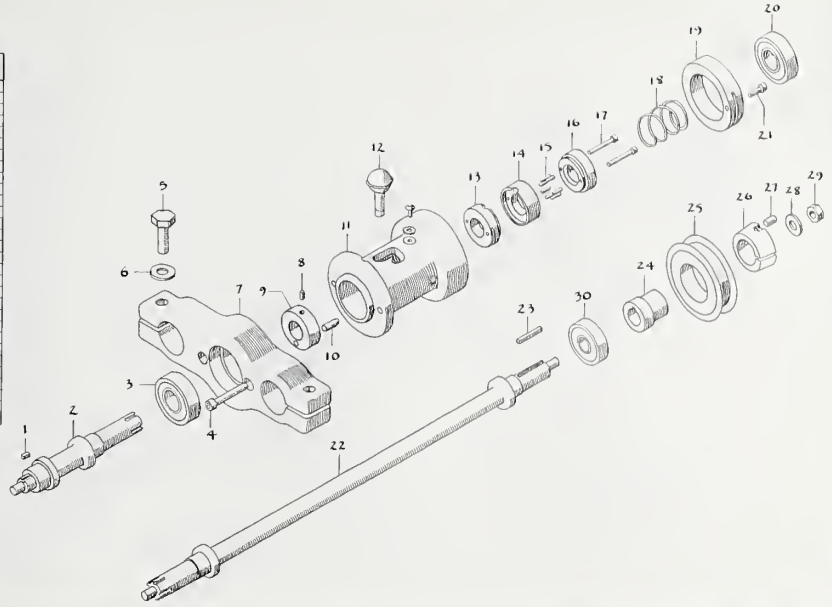
LOWER SPINDLE AND CRANK BLOCK ASSEMBLY

DATE 7-94
PLATE 102

ITEM NO.	PLATE REF. NO.	QTY. REQ.	Pearl DESCRIPTION
1	38	1	KEY ~ 1/8 SQ. x 3/8
2	38	1	BOTTOM DRIVE SHAFT
3	10	1	BEARING ~ #104-KSZZ
4	10	2	S.H.C.S. ~ 1/4-20 x 1
5	10	2	BOLTS
6	10	2	WASHERS
7	10	1	GEARBOX BLOCK
8	40	1	SET SCREW, MODIFY
9	40	1	OOG DRIVER
10	40	1	OOG
11	39	1	GEARBOX HOUSING
12	40	1	SHIFT KNOB
13	40	1	SYNCHRONIZER SEG.
14	40	1	SYNCHRONIZER SEG.
15	40	7	DRIVE PINS
16	40	1	SYNCHRONIZER SEG.
17	40	2	S.H.C.S.
18	40	1	SPRING
19	39	1	ADJUSTER RING
20	39	1	BEARING ~ #104-KSZZ
21	39	1	S.H.C.S.
22	38	1	BOTTOM DRIVE SHAFT
23	38	1	KEY ~ 1/8 SQ. x 1
24	24	1	HUB
25	24	1	PULLEY ~ #TJ6L050
26	24	1	BUSHING ~ #119197
27	24	2	S.H.S.S. ~ 3/8-16 x 3/8
28	24	1	WASHER
29	38	1	NUT ~ 3/8-24
30	73	1	BEARING ~ #203-SZZ



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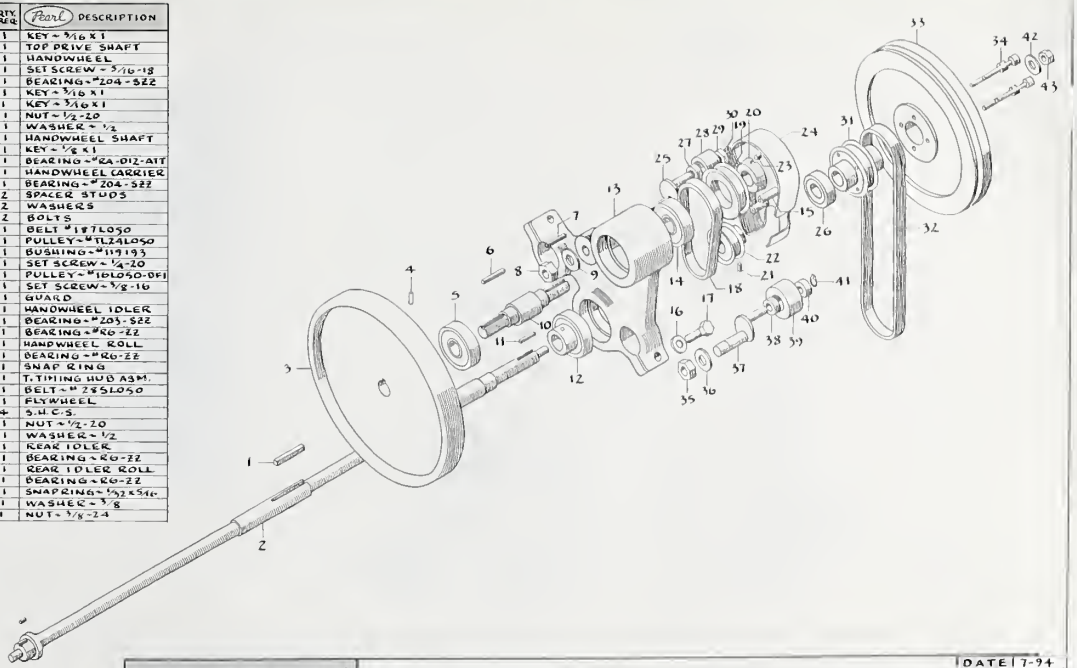
LOWER GEARBOX AND DRIVESHAFT ASSEMBLY

DATE 7-94
PLATE 103

ITEM No.	PLATE REF. No.	QTY. REQ.	Pearl DESCRIPTION
1	37	1	KEY - 3/16 X 1
2	37	1	TOP DRIVE SHAFT
3	44	1	HANDWHEEL
4	44	1	SET SCREW - 5/16-18
5	53	1	BEARING - #204-5ZZ
6	85	1	KEY - 3/16 X 1
7	83	1	KEY - 3/16 X 1
8	81	1	NUT - 1/2-20
9	81	1	WASHER - 1/2
10	83	1	HANDWHEEL SHAFT
11	37	1	KEY - 1/8 X 1
12	13	1	BEARING - #RA-012-AIT
13	13	1	HANDWHEEL CARRIER
14	13	1	BEARING - #204-5ZZ
15	96	2	SPACER STUDS
16	13	2	WASHERS
17	13	2	BOLTS
18	13	1	BELT #187L050
19	83	1	PULLEY - #TL24L050
20	83	1	BUSHING - #119193
21	13	1	SET SCREW - 1/4-20
22	15	1	PULLEY - #161L050-DFI
23	83	1	SET SCREW - 5/8-16
24	78	1	GUARD
25	81	1	HANDWHEEL IDLER
26	73	1	BEARING - #203-5ZZ
27	82	1	BEARING - #R6-ZZ
28	92	1	HANDWHEEL ROLL
29	82	1	BEARING - #R6-ZZ
30	81	1	SNAP RING
31	23	1	T-TIMING HUB ASM.
32	24	1	BELT - #285L050
33	22	1	FLYWHEEL
34	22	4	S.H.C.S.
35	87	1	NUT - 1/2-20
36	87	1	WASHER - 1/2
37	87	1	REAR IDLER
38	80	1	BEARING - R6-ZZ
39	80	1	REAR IDLER ROLL
40	80	1	BEARING - R6-ZZ
41	87	1	SNAPRING - 1/32 x 5/16
42	37	1	WASHER - 3/8
43	37	1	NUT - 3/8-24



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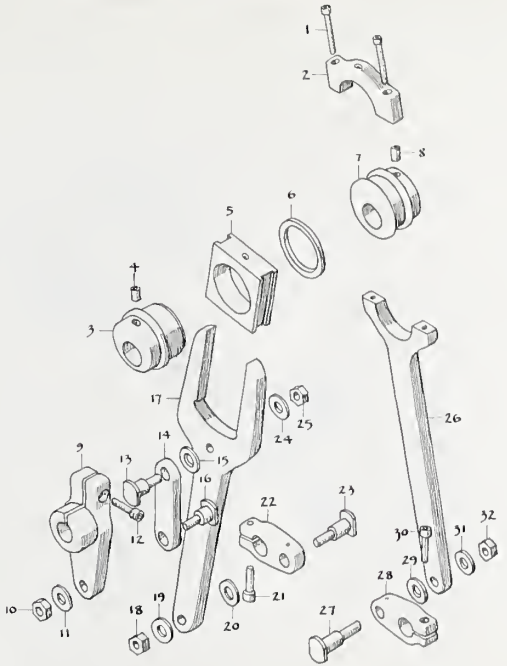
UPPER DRIVE SHAFT AND HANDWHEEL ASSEMBLY

DATE 7-94
PLATE 104

ITEM NO.	PLATE REF NO.	QTY. REQ.	Pearl DESCRIPTION
1	21	2	S.H.C.S.
2	21	1	ARM CAP
3	20	1	ROCKER LINK ECCENTRIC
4	20	1	SET SCREW
5	20	1	SLIDE BEARING
6	20	1	BEARING KEEPER
7	21	1	FT. ROCKER PIVOT ECCENTRIC
8	21	1	SET SCREW
9	47	1	T. PIVOT ARM
10	20	1	NUT
11	21	1	WASHER - 1/4
12	47	1	S.H.C.S. - 1/4-20 x 1
13	20	1	PIVOT BOLT
14	20	1	DRAG LINK
15	20	1	WASHER
16	20	1	PIVOT BOLT
17	20	1	YOLK ARM
18	21	1	NUT
19	21	1	WASHER - 1/4
20	20	1	WASHER
21	50	1	S.H.C.S. - 1/4-20 x 1
22	50	1	ECCENTRIC PIVOT
23	21	1	PIVOT BOLT
24	21	1	WASHER
25	21	1	NUT
26	21	1	ARM
27	21	1	PIVOT BOLT
28	50	1	ECCENTRIC PIVOT
29	20	1	WASHER
30	50	1	S.H.C.S. - 1/4-20 x 1
31	21	1	WASER - 1/4
32	21	1	NUT



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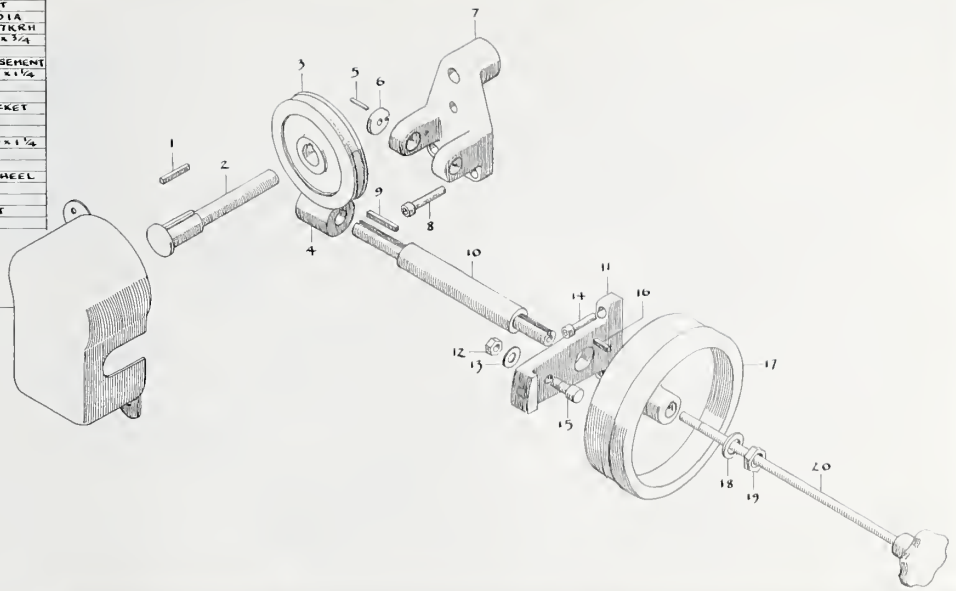
VARIABLE ECCENTRIC ASSEMBLY

DATE 7-94
PLATE 105

ITEM NO.	PLATE REF NO.	QTY. REQ.	Pearl DESCRIPTION
1	42	1	KEY ~ 1/8 x 1
2	42	1	W. GEAR SHAFT
3	14	1	GEAR ~ #081601A
4	14	1	WORM ~ #D1007KRH
5	14	1	ROLL PIN ~ 1/8 x 3/4
6	48	1	LOCK NUT
7	14	1	WORM GEAR CASEMENT
8	14	3	S.H.C.S. ~ 1/4-20 x 1 1/4
9	43	1	KEY ~ 1/8 x 1
10	43	1	WORM SHAFT
11	40	1	T. WHEEL BRACKET
12	40	1	NUT ~ 1/4-20
13	40	1	WASHER ~ 1/4
14	40	2	S.H.C.S. ~ 1/4-20 x 1 1/4
15	40	1	STOP PIN
16	43	1	KEY ~ 1/8 x 3/4
17	41	1	TRANSPORT WHEEL
18	43	1	WASHER ~ 1/2
19	43	1	NUT ~ 1/2-20
20	48	1	T. LOCKSHAFT
21	77	1	T. GUARD



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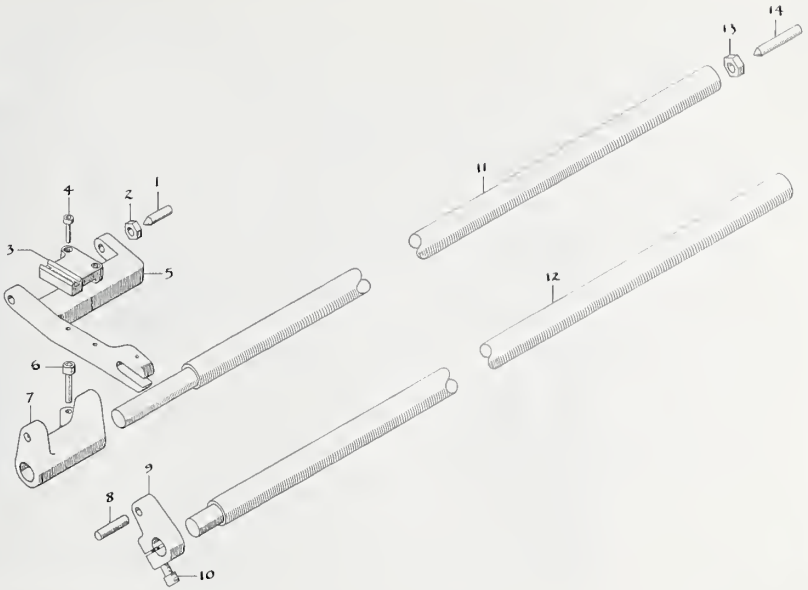
TRANSPORT WHEEL ASSEMBLY~FEED

DATE 7-94

PLATE 106

ITEM No.	PLATE REF. No.	QTY. REQ.	Pearl DESCRIPTION
1	45	2	SET SCREW, MODIFY
2	45	2	NUTS
3	89	1	PLATE GRIPPER
4	89	2	S.H.C.S. - #8-32 x 3/4
5	45	1	ROCKER LINK
6	51	1	S.H.C.S. - 1/4-20 x 3/4
7	51	1	RR. ROCKER PIVOT
8	49	1	DOWEL
9	49	1	F. ROCKER PIVOT
10	49	1	S.H.C.S. - 1/4-20 x 3/4
11	52	1	REAR ROCKER SHAFT
12	52	1	FRONT ROCKER SHAFT
13	98	2	NUTS, - 3/8-16, JAM
14	98	2	PIVOT SCREWS



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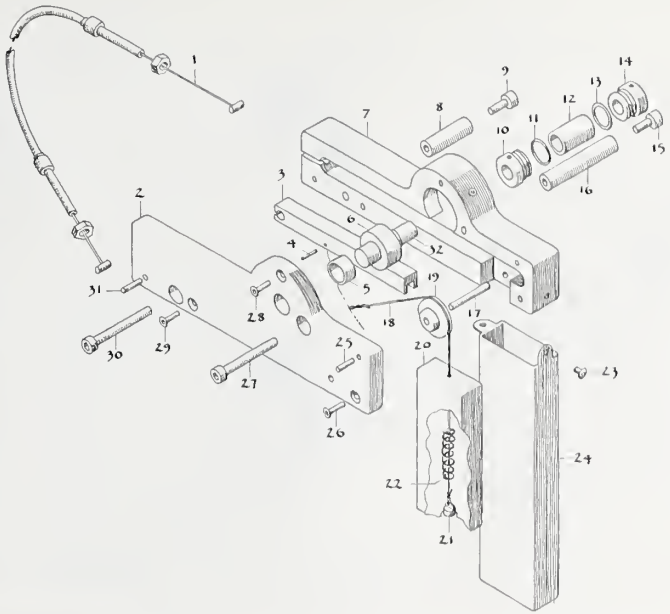
TRANSPORT ASSEMBLY - FEED

DATE 7-94

PLATE 107

ITEM NO.	PLATE REF. NO.	QTY. REQ.	Pearl DESCRIPTION
1	66	1	CONTROL CABLE
2	10	1	COVER PLATE
3	10	1	RACK - #L509-Z
4	10	1	PIN
5	10	1	BUSHING
6	10	1	PINION
7	15	1	SPEED CONTROL HOUSING
8	88	1	SPACER
9	88	1	S.H.C.S. - #10-32 x 1/2
10	17	1	COLLAR
11	17	1	O-RING
12	17	1	TUBE
13	17	1	O-RING
14	17	1	COLLAR
15	88	1	S.H.C.S. - #10-32 x 1/2
16	88	1	SPACER
17	10	1	DOWEL PIN
18	10	1	CABLE
19	10	1	PULLEY
20	17	1	COUNTERWEIGHT
21	16	1	KEEPER
22	10	1	SPRING
23	15	2	B.H.C.S. - #8-32 x 3/8
24	17	1	COUNTERWEIGHT CAM
25	10	1	ROLL PIN - 1/8 x 1/2
26	10	1	F.H.C.S. - #6-32 x 3/8
27	10	1	S.H.C.S. - #10-32 x 1 1/4
28	10	1	F.H.C.S. - #6-32 x 5/8
29	10	1	F.H.C.S. - #6-32 x 3/8
30	10	1	S.H.C.S. - #10-32 x 1 1/4
31	10	1	ROLL PIN - 1/8 x 1/2
32	10	1	SHAFT



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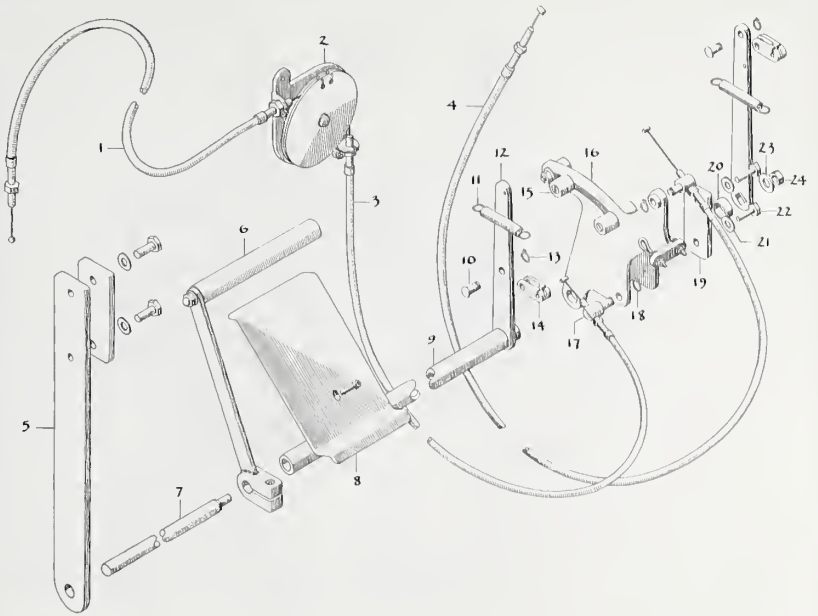
SPEED CONTROL ASSEMBLY

DATE 7-94
PLATE 108

ITEM NO.	PLATE REF. NO.	QTY. REQ.	Pearl DESCRIPTION
1	66	1	CABLE - TO STRIPPER
2	79	1	CABLE PULLEY ASM.
3	69	1	CABLE - FROM FOOT CNTL
4	66	1	CABLE - TO SPEED CNTL
5	16	1	END CLAMP BAR ASM.
6	18	1	ARM - SPEED CONTROL
7	18	1	SHAFT - SPEED ARM
8	18	1	PEDAL - STRIPPER
9	18	1	TUBE - STRIPPER ASM.
10	18	2	CLEVIS PINS
11	19	2	SPRING - ARM RETURN
12	18	1	ARM - STRIPPER
13	18	2	SNAP RINGS
14	18	2	CLEVIS
15	18	4	LEVER STOPS
16	19	1	FOOT CONTROL HEAD
17	19	2	CABLE SWIVELS
18	19	2	SNAP RINGS
19	19	1	CLAMP PLATE
20	18	1	SPACER
21	19	2	WASHER - 5/16
22	19	2	BOLTS
23	18	1	WASHER - 1/2
24	18	1	NUT - 1/2 - 10



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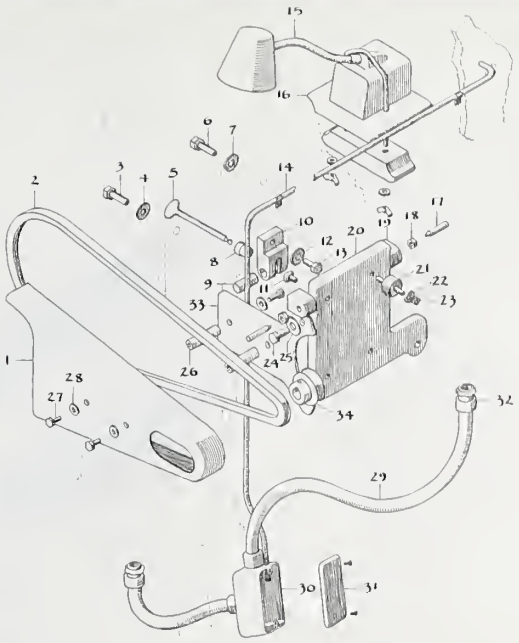
FOOT CONTROL ASSEMBLY

DATE 7-74

PLATE 109

ITEM NO.	PLATE REF NO.	QTY. REQ.	Pearl DESCRIPTION
1	70	1	MOTOR BELT GUARD
2	70	1	BELT - #3L360
3	62	1	BOLT - 3/8-16 x 1
4	62	1	WASHER - 3/8
5	64	1	SCREW
6	62	1	BOLT - 3/8-16 x 1
7	62	1	WASHER
8	64	1	SCREW LOCK NUT
9	63	1	SWIVEL
10	65	1	BRACKET
11	64	1	SWIVEL PAD
12	65	1	WASHER - 5/8
13	65	1	BOLT - 5/8-16 x 1
14	91	1	CONDUIT
15	90	1	LAMP - #3612
16	90	1	LAMP MOUNT ASM.
17	97	1	SETSCREW - 5/16-18 x 1 1/2
18	97	1	NUT - 5/16-18
19	62	1	PIVOT
20	01	1	MOTOR MOUNT PLATE
21	85	4	MOTOR MOUNTS
22	85	4	WASHERS - 3/16
23	85	4	NUTS
24	07	2	BOLTS - 5/8-16 x 1
25	07	2	WASHERS - 5/8
26	07	2	SPACERS
27	07	4	BOLTS - 1/4-20 x 1
28	07	4	WASHER - 1/4
29	91	2	3/4 - SEALTIGHT CONDUIT
30	91	1	CONDUIT BOX
31	91	1	COVER
32	91	4	3/4 - SEALTIGHT FITTING
33	07	1	GUARD BRACKET
34	84	1	MOTOR PULLEY



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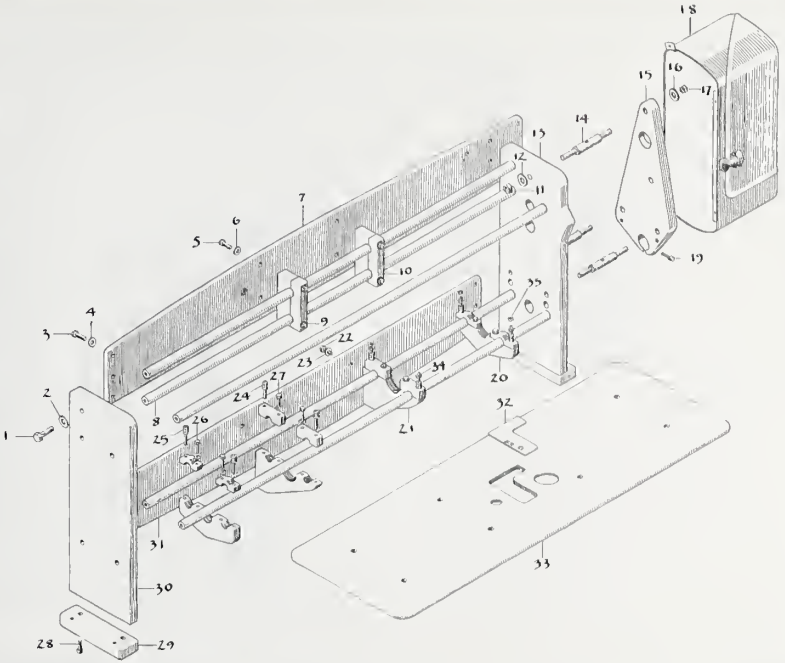
MOTOR MOUNTING & CONDUIT ASSEMBLY

DATE 7-94
PLATE 110

ITEM NO.	PLATE REF. NO.	QTY. REQ.	Pearl DESCRIPTION
1	52	10	BOLTS - 1/2-20 x 2
2	52	10	WASHER - 1/2
3	68	12	BOLTS - 5/16-18 x 1 1/2
4	68	12	WASHER - 5/8
5	60	4	BOLTS - 3/8-16 x 1
6	60	4	WASHER - 3/8
7	68	1	TOP ARCH
8	52	5	MAIN STAY SHAFTS
9	60	4	BOLTS, WSR. - 3/8-16x2
10	80	2	TOP CLAMP
11	95	3	NUTS - 1/2-20
12	95	3	WASHER - 1/2
13	71	1	RIGHT END PLATE
14	95	3	END PLATE STUDS
15	73	1	END CAP
16	95	3	WASHER
17	95	3	NUTS - 1/2-20
18	73	1	REAR COVER GUARD
19	73	1	S.H.C.S - 5/16-18x1 1/2
20	56	2	BED SUPPORT
21	57	2	LOWER CLAMP
22	57	4	BOLTS - 3/8-16 x 1 1/2
23	57	4	WASHER - 3/8
24	59	4	LOWER CLAMP STUD
25	58	4	BED SUPPORT STUD
26	50	4	BOLT, WSR. - 5/16-18x1 1/2
27	57	4	BOLT, WSR. - 3/8-16x1 1/2
28	72	4	S.H.C.S. - 3/8-16 x 2
29	72	2	FEET
30	70	1	LEFT END PLATE
31	69	1	BOTTOM ARCH
32	55	1	BED COVER PLATE
33	53	1	BED
34	80	8	BED JACK SCREW
35	80	8	JAM NUTS - 5/16-18



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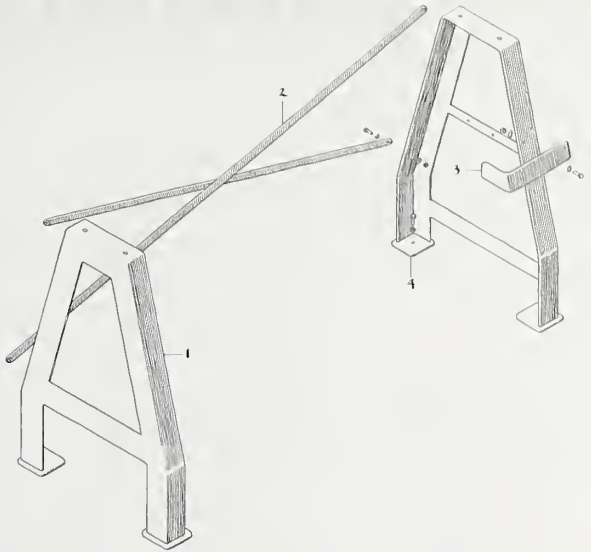
GENERAL FRAME ASSEMBLY

DATE 7-94
PLATE III

ITEM No.	PLATE REF. No.	QTY. REQ.	Pearl DESCRIPTION
1	74	2	LEGS
2	74	2	CROSS BRACES
3	74	1	BUMPER
4	74	4	PADS



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MACHINE STAND

DATE 7-74
PLATE 112

MAINTENANCE

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INTRODUCTION

The Pearl machine is designed to emboss .011" thick zinc plates with raised line drawings. An operator following an applied diagram tools the image upon the plate by guiding the embossing.

The folded and embossed plate forms a mold which in turn prints tactile copies. These copies ultimately are included in various braille print productions.

LEVELING MACHINE

Use a standard small bubble level in two positions to level machine. Level across width and length of Stay Bars (see Figure 1).

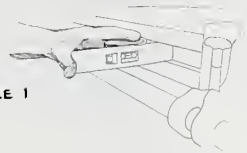


Figure 1

GEARBOX-ADJUSTER RING

The adjuster ring provides clearance between driveshaft halves (see Plate 103, Item 19). Using a suitable face pin spanner wrench, turn bearing ring inward until it stops. Do not force. Back off 1/16 to 1/8 of a turn (see Figure 2). Lock bearing ring in place with lock screw (see Plate 103, Item 21).

(GEARBOX, cont.)

Figure 2

Lock gearbox and turn lower shaft over by hand (see Figure 3). Both drive shaft and gearbox shifter must move freely.

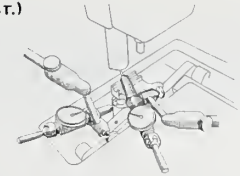
Figure 3

SYNCHRONIZING SPINDLES

It is very important that both spindles close and open simultaneously. To check this, first unlock the gearbox. Next, place indicators in position (illustrated in Figure 4) and turn machine over by hand in the normal running direction. Observe the opening and closing of both spindles. If spindle synchronization is correct, then both indicators will start simultaneously within .001" of each other.

(SYNCHRONIZATION, CONT.)

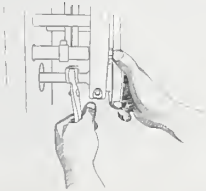
FIGURE 4



SHOULD THE SPINDLES NOT BE IN SYNCHRONIZATION, THEN THE MOVEMENT OF THE TOP SPINDLE MUST BE MADE TO CONFORM TO THE MOVEMENT OF THE BOTTOM SPINDLE. THIS IS ACCOMPLISHED BY ADVANCING OR RETARDING THE BOTTOM REAR TIMING PULLEY (SEE FIGURE 5).

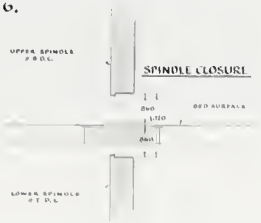
ADJUST THE BOTTOM REAR TIMING PULLEY. ROLL MACHINE OVER BY HAND AND CHECK THE DEGREE OF SPINDLE SYNCHRONIZATION. REPEAT PROCEDURES UNTIL SYNCHRONIZATION IS VERIFIED BY THE INDICATORS.

FIGURE 5



SPINDLE CLOSURE - AFTER SPINDLES ARE SYNCHRONIZED, ADJUST CLOSURE TO WITHIN .001" OF DIMENSIONS ILLUSTRATED IN FIGURE 6.

FIGURE 6



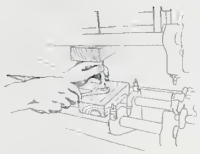
TO ACCOMPLISH PROPER CLOSURE, FIRST LOCK GEARBOX (SEE FIGURE 3). MOVE UPPER SPINDLE TO ABSOLUTE BOTTOM DEAD CENTER (B.D.C.) WITHIN .001". USE A DIAL INDICATOR TO ENSURE POSITION. CHECK CLOSURE DIMENSIONS WITH STACKED GAUGE BLOCKS (FIGURE 7). FIT GAUGE IN TIGHTLY TO FORCE OUT PLAY IN CONNECTING RODS.

FIGURE 7

(CLOSURE, CONT.)

ADJUST CLOSURE BY FIRST LOOSENING TOP CLAMP AND LOWER CLAMP BOLTS (SEE PLATE 111, ITEMS 10, 5, 21, 22). CLOSURE MAY BE OPENED BY JACKING (AS SHOWN IN FIGURE 8) OR CLOSED BY PLACING SAME JACK BLOCKS ON OPPOSITE SIDES OF STAY BARS AND TIGHTENING SCREW. WHEN DIMENSION IS OBTAINED, TIGHTEN CLAMP BOLTS. RECHECK DIMENSION WITHOUT CLAMP PRESSURE.

FIGURE 8



SPINDLE ALIGNMENT

BEGIN SPINDLE ALIGNMENT BY UNLOCKING GEARBOX AND INSTALLING ALIGNMENT PUNCHES (SEE PLATE 99). BRING POINTS OF PUNCHES TOGETHER. VIEW POINTS FROM TWO DIRECTIONS, SIDE AND FRONT. MAGNIFY POINTS (SEE FIGURE 9).

FIGURE 9

(ALIGNMENT, CONT.)

AS VIEWED FROM FRONT OF MACHINE, MISALIGNED PUNCHES THAT TEND LEFT OR RIGHT SHOULD BE CORRECTED BY MOVING THE BOTTOM SPINDLE. TO DO THIS, LOOSEN ALL STAY BAR CLAMP BOLTS OF LOWER SPINDLE AND CRANK BLOCK ASSEMBLY (PLATE 102) AND THE SAME BOLTS OF THE LOWER GEARBOX AND DRIVE SHAFT ASSEMBLY (PLATE 103). MOVE TO THE REAR OF THE MACHINE AT THE END CAP BEARING CLAMP BOLT (PLATE 111, ITEM 19). LOOSEN THIS BOLT. MOVE ENTIRE ASSEMBLIES A LITTLE AT A TIME BY LIGHT BRONZE HAMMER TAPS (SEE FIGURES 10 AND 11).

FIGURE 10

FIGURE 11

CONTINUE MOVING ASSEMBLIES EITHER LEFT OR RIGHT TO OBTAIN ALIGNMENT. ONCE LOWER SPINDLE BLOCK (PLATE 102) IS IN PLACE, TIGHTEN CLAMP BOLTS. MEASURE DISTANCE BETWEEN UPPER SPINDLE BLOCK (PLATE 101, ITEM 42). DUPLICATE THIS DIMENSION BETWEEN LOWER SPINDLE BLOCK (PLATE 102, ITEM 9) AND LOWER CRANK BLOCK (PLATE 102 ITEM 31). ROLL MACHINE OVER BY HAND. CHECK SLIDE BEARING ADJUSTMENT. SEE PARAGRAPH SLIDE BEARING ENGAGEMENT (BELOW).

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(ALIGNMENT, CONT.)

IF SPINOLES ARE MISALIGNED FRONT TO BACK, THEN THE TOP OR BOTTOM CLAMPS WILL HAVE TO BE SHIMMED. CHOOSE THE SPINOLE THAT TENDS TO BE TOWARDS THE REAR FOR ADJUSTMENT. SHOULD THIS SPINOLE BE THE BOTTOM, FOR EXAMPLE, IT WILL HAVE TO BE MOVED FORWARD BY THE USE OF SHIMS UNDER THE LOWER CLAMPS (SEE PLATE - 111, ITEM 21).

LOOSEN LOWER CLAMP BOLTS (SEE PLATE 111, ITEM 22). MAKE SUITABLE SHIMS AND PLACE BETWEEN LOWER CLAMPS AND BOTTOM ARCH (SEE PLATE 111, ITEM 31). PLACE SHIMS AT THE FOUR CLAMP BOLTS (SEE FIGURE 12). WHEN POSITION IS OBTAINED, RECHECK BOTH LEFT TO RIGHT ALIGNMENT AND THE CRITICAL CLOSURE DIMENSIONS AS WELL.

FIGURE 12

SLIDE BEARING ENGAGEMENT - REFERRING TO PLATE 101, ITEMS 31 AND 39 ALSO PLATE 102, ITEMS 20 AND 28, LOCATE AND CHECK THESE PARTS ON THE MACHINE. THE SLIDE BEARINGS MUST ENTER THE SLIDE BLOCKS 3/8" AND HAVE A TOTAL SLIDE CLEARANCE OF .004". THE ENTRANCE DIMENSION CAN BE OBTAINED VISUALLY BY MOVING THE CRANK BLOCKS LEFT OR RIGHT; HOWEVER A FEELER GAUGE SHOULD BE USED TO ADJUST CLEARANCE OF THE

(ENGAGEMENT, CONT.)

SLIDE BEARINGS AND SLIDE BLOCKS THROUGH LOOSENING LOCK SCREWS (PLATE 101, ITEM 44 AND PLATE 102 ITEM 33) AND ADJUSTING GIB SCREWS (PLATE 102, ITEM 46 AND PLATE 102, ITEM - 34).

BED ALIGNMENT - THE BED MUST BE BOTH IN POSITION (FIGURE 6) AND LEVEL (FIGURE 14). RAISE OR LOWER BED BY ADJUSTING BED JACK SCREWS UNTIL DIMENSION IS OBTAINED (SEE FIGURE 13).

FIGURE 13

CONTINUE ALIGNMENT BY LEVELING BED. PLACE LEVEL ACROSS WIDTH AND LENGTH OF BED AS IN FIGURE 14. RECHECK POSITION.

FIGURE 14

PLATE GRIPPER

Feeding action depends upon the condition and setting of the Plate Gripper (see Plate 89). Keep teeth of gripper sharp. Regrind or replace yearly.

Adjust Rocker Link (Plate 107, Item 5) such that gripper teeth are equal distances from spindle centerline. Here it is helpful to use alignment punches (Plate 99). Continue setting gripper by adjusting rise (see Figure 15).

Figure 15

ROCKER LINK CLEARANCE

Make sure there is at least .005 to .010 clearance between the Rocker Link and the Front Rocker Pivot (see Figure 16). Adjust front rocker pivot to obtain clearance.

Figure 16

ROCKER LINK ADJUSTMENT

The Rocker Link has two functions. First, it provides a mounting place for the gripper. Second, it moves the gripper front to back (see Plate 107, Item 5). The rocker movement, as well as its timing, is generated by a cam or eccentric in the rear of the machine (see Plate 105, Item 3).

The length of the stroke is determined by the Transport Wheel Assembly (see Plate 106). Stroke placement in reference to the centerline of the spindles can be adjusted by moving the Rocker Pivot (see Figure 17).

Figure 17

FRONT ROCKER PIVOT

The function of the Front Rocker Pivot is to raise and lower the gripper. The rocker movement, as well as its timing, is generated by a cam or eccentric in the rear of the machine (see Plate 105, Item 7).

In use, the gripper teeth rise above the surface of the bed and contact the plate that is being embossed. The plate is then pulled forward by the function of the rocker link. The cycle ends as the front rocker pivot lowers the gripper teeth at the end of the feed stroke (see Plate 107, Item 9).

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MECHANICS

DATE 2-94
PLATE 118

TRANSPORT SETTINGS

The stroke of the gripper, or actual increments of plate movement identified as as pitch in Line Specifications Plate (121), may be altered by moving the Transport Pivot Arm (see Plate 105, Item 9; also see-Figure 18).

Figure 18

TIMING-GENERAL

The plate movement must be in time with the spinole movement. The object is to strike the plate just after it stops moving. The connection between the plate movement and the spindle movement is the eccentrics of the Rocker Link and the Front Rocker Pivot. See Plate 105, Items 3 and 7; these cams control the timing.

Assuming that all alignments and aojustments have been made, begin to rough-in timing. Install any dot punch set. Unlock gearbox and gently roll machine over by hand. Make sure nothing collides. Advance or retard cams such that punches close just as gripper moves below surface.

Insert a zinc printing plate between Foot and Gripper. Move the Transport Handwheel (Plate 106, Item 17), or the Transport Pivot Arm (Plate 105, Item 9) in small increments.

(TIMING, cont.)

Roll machine over by hand to produce a trail dotted line.

Make the Transport Handwheel pitch settings conform to the trial line. Measure the pitch of the trial line. To determine corresponding feed setting, refer to the Line Specification Chart. Find the closest corresponding pitch value. The line is also the feed setting. Unlock the Transport Pivot Arm (see Plate 105, Item 9) and turn transport handwheel to this setting. Lock pivot arm. The machine should make a dotted line with settings that roughly correspond to those outlined in the chart.

Continue to refine timing by adjusting cams and the pivot arm. Observation and delicate adjustments are required to fine tune timing. Test and compare each adjustment. Utimately, all specified lines must be reproducible.

FINAL PERFORMANCE TESTING

Refer to the Line Specification Chart (see Plate 121). Reproduce all lines of chart in a standard zinc printing plate. Label impressions. Print (press work) several paper copies using dampened braille press stock. Let dry overnight.

Again, referring to line specification chart, begin to measure the heigth of the embossed lines of the paper. Measure from the paper's surface to the ultimate height of each line and compare against chart (see Figure 19).

The fixture for measuring copy, consists of a over arm mounted dial indicator of light pressure using a large contact pad. The arm is secured to a surface plate.

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FIGURE 19

MOTER BELT ADJUSTMENT

- REMOVE MOTOR BELT GUARD AND INSPECT BELT (SEE PLATE 110, ITEM 1). BELT SHOULD NOT DEFLECT MORE THAN ¾" PER SIDE (SEE FIGURE 20). IF ADJUSTMENT IS NEEDED, TURN ADJUSTMENT SCREW (PLATE 110, ITEM 5).

FIGURE 20

CABLE ADJUSTMENT

- AT EACH END OF ALL CABLES THERE ARE LOCK NUTS AND ADJUSTERS. ADJUST CABLES SO THAT, AT REST, A LITTLE PLAY CAN BE DECTECTED. MAKE SURE CABLES ARE NOT BOUND.

FOOT CONTROL ADJUSTMENT

- THE ENTIRE FOOT CONTROL ASSEMBLY CAN BE MOVED IN TWO DIRECTIONS. LOOSEN THE CLAMP PLATES TO MOVE ASSEMBLY (SEE PLATE 109, ITEMS 6 AND 8). INDIVIDUAL PEDALS CAN ALSO BE ADJUSTED (SEE PLATE 109, ITEMS 6 AND 8). END

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MECHANICS

DATE 9-94
PLATE 120

Pearl LINE SPECIFICATIONS

PUNCH SET	FEED SETTING	GEARBOX POSITION	DESCRIPTION OF LINE	PITCH	IMPRESSION HEIGHT ABOVE PAPERS SURFACE	EXAMPLE
16	22	UNLOCK	LARGE DOTTED	.110	.023	
16	35	UNLOCK	LARGE DOTTED	.175	.023	
18	20	UNLOCK	SMALL DOTTED	.100	.018	
16[2]	20	UNLOCK	MEDIUM DOTTED	.100	.010	
14[3]	29	UNLOCK	LARGEST DOTTED	.145	.022	
14[3]	39	UNLOCK	LARGEST DOTTED	.200	.022	
17[2]	24	UNLOCK	DOUBLE DOTTED	.120	.021	
11	8	LOCK	SOLID REGULAR		.019	
11	8	LOCK	BROKEN	.375 PITCH .250 DASH	.021	
19	8	LOCK	DOUBLE SOLID		017	
13[4]	8	LOCK	WIDE SOLID		.019	
20	20	UNLOCK	RAILROAD	.115	.018	
20	35	UNLOCK	RAILROAD	.185	024	

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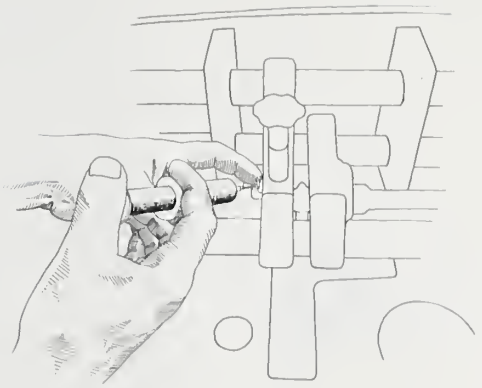
LINE SPECIFICATIONS

DATE 8-94
PLATE 121

Pearl LUBRICATION			
TYPE	MEDIUM OIL; MACHINE		
AMOUNT	4 DROPS EACH		
FREQUENCY	DAILY		
REFERENCES			
PLATES	8	101	102
ITEMS		12	7
NOTES			
MAKE SURE SPINDLES ARE WET WITH OIL DURING USE.			



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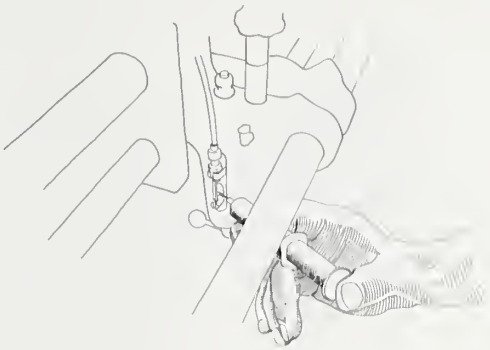
LUBRICATION - SPINDLES

DATE 5 74

PLATE 122

Pearl LUBRICATION				
TYPE	MEDIUM OIL, MACHINE			
AMOUNT	2 DROPS EACH			
FREQUENCY	WEEKLY			
REFERENCES				
PLATES	36	101		
ITEMS		4	1	
NOTES				
OIL TOP OF STRIPPER SHAFT AT TENSION ADJUSTER ALSO.				



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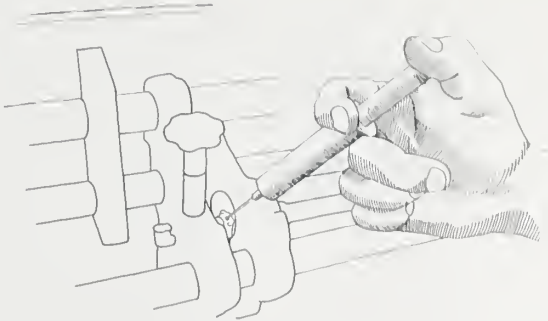
LUBRICATION - STRIPPER SHAFT

DATE 8-74
PLATE 123

Pearl LUBRICATION			
TYPE	MEDIUM OIL, MACHINE		
AMOUNT	2 DROPS EACH END		
FREQUENCY	DAILY		
REFERENCES			
PLATES	32	101	102
ITEMS		26	18
NOTES			
OIL EACH END OF CONNECTING RODS.			



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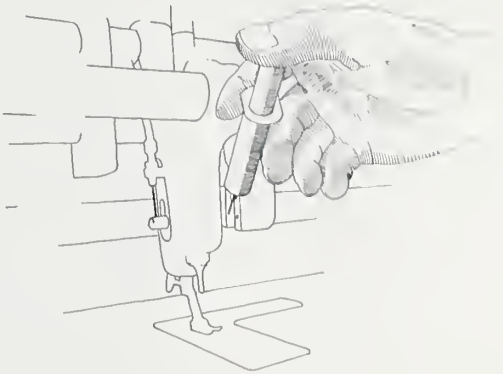
LUBRICATION - CONNECTING RODS

DATE 8-74
PLATE 124

Pearl LUBRICATION				
TYPE	MEDIUM CLINGING OIL			
AMOUNT	4 DROPS PER SLIDE			
FREQUENCY	WEEKLY			
REFERENCES				
PLATES	28	30	101	102
ITEMS			39	28

NOTES

TURN MACHINE OVER BY HAND WHILE OILING SLIDE BLOCKS. IT IS HELPFUL TO PLACE OIL ON TOP OF SLIDE BEARINGS TO EVENLY DISTRIBUTE OIL ON SLIDE BLOCK FACES



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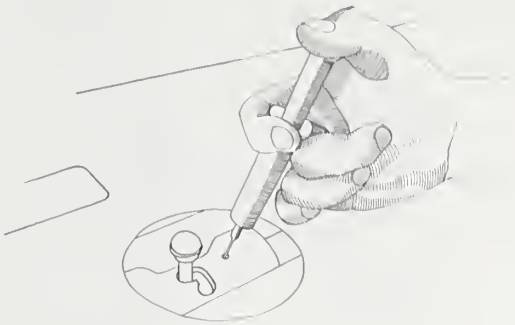
LUBRICATION - SLIDE BLOCKS

DATE 8-94

PLATE 125

Pearl LUBRICATION				
TYPE	40 WGHT. ~ MACHINE			
AMOUNT	15 C.C.			
FREQUENCY	YEARLY			
REFERENCES				
PLATES	39	103	103	
ITEMS		11	19	
NOTES				
REMOVE TOP PLUG FROM GEARBOX AND FILL. IF GEARBOX LEAKS REMOVE ADJUSTER RING AND COVER THREADS WITH A PLIABLE SEALANT.				



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LUBRICATION ~ GEARBOX

DATE 8-94

PLATE 126

Pearl LUBRICATION

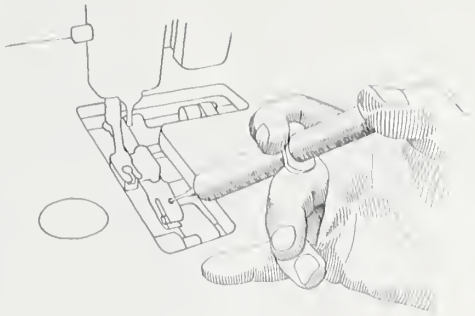
TYPE	MEDIUM OIL, MACHINE
AMOUNT	1 DROP EACH PLACE
FREQUENCY	WEEKLY

REFERENCES

PLATES	45	107	107	
ITEMS		@ 8	@ 7	

NOTES

TURN MACHINE OVER BY HAND. OBSERVE PIVOT POINTS. OIL THESE FOUR PLACES AS WELL.



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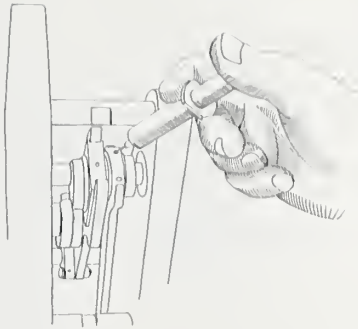
LUBRICATION - FEED MECHANISM

DATE 8-79
PLATE 127

Pearl LUBRICATION				
TYPE	MEDIUM OIL, MACHINE			
AMOUNT	3 DROPS, EACH PLACE			
FREQUENCY	BI-WEEKLY			
REFERENCES				
PLATES	20	21	105	
ITEMS			ALL	
NOTES				
TURN MACHINE OVER BY HAND. OBSERVE ECCENTRIC AND PIVOT MOVEMENTS, OIL THESE SIX PLACES.				



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LUBRICATION - ECCENTRIC MECHANISM

DATE 8-94
PLATE 128

Pearl LUBRICATION

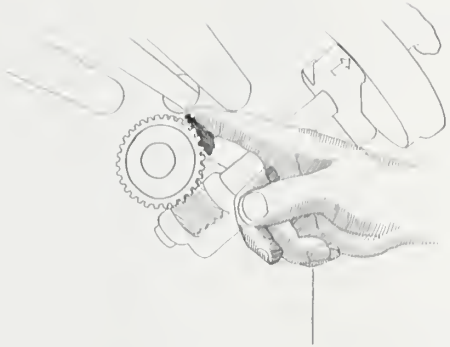
TYPE	GENERAL PURPOSE GREASE
AMOUNT	SLIGHT - EACH PLACE
FREQUENCY	AS NEEDED

REFERENCES

PLATES	106	106	106	106
ITEMS	3	4	10	11

NOTES

ALL PARTS SHOULD BE GREASED AT ASSEMBLY AND LAST FOR SEVERAL YEARS. MECHANISM MUST WORK FREELY. SHOULD ROUGH OR STICKY MOVEMENT OCCUR, DISASSEMBLE CLEAN AND LUBRICATE.



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LUBRICATION - TRANSPORT HANDWHEEL ASM.

DATE 8-94
PLATE 129

Pearl LUBRICATION	
TYPE	MEDIUM OIL, MACHINE
AMOUNT	2 DROPS
FREQUENCY	WEEKY

REFERENCES					
PLATES	108				
ITEMS	7				

NOTES

SHOULD CONTROL ACTION BECOME STICKY OR NOT RETURN TO STOP POSITION, OIS MANTEL UNIT. CLEAN MOVING PARTS WELL. RELUBRICATE.

Pearl LUBRICATION

TYPE	MEDIUM OIL, MACHINE
AMOUNT	3 DROPS EACH PLACE
FREQUENCY	WEEKLY

REFERENCES

PLATES	109	109	109	
ITEMS	ALL	7	12	

NOTES

OIL ALL MOVING PARTS - THE MAIN TUBE (STRIPPER TUBE) AND THE SPEED ARM SHAFT SHOULD BE WELL GREASED AT ASSEMBLY AND SHOULD LAST SEVERAL YEARS. IF PETALS OR ARMS BECOME STICKY- DISMANTEL ASSEMBLY, CLEAN AND RELUBRICATE.

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LUBRICATION - FOOT CONTROLS

DATE 8-74
PLATE 131

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